

EXHIBIT 1

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

ANDREW CORZO, SIA HENRY, ALEXANDER LEO-GUERRA, MICHAEL MAERLENDER, BRANDON PIYEVSKY, BENJAMIN SHUMATE, BRITTANY TATIANA WEAVER, and CAMERON WILLIAMS, individually and on behalf of all others similarly situated,

Plaintiffs,

v.

BROWN UNIVERSITY, CALIFORNIA INSTITUTE OF TECHNOLOGY, UNIVERSITY OF CHICAGO, THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK, CORNELL UNIVERSITY, TRUSTEES OF DARTMOUTH COLLEGE, DUKE UNIVERSITY, EMORY UNIVERSITY, GEORGETOWN UNIVERSITY, THE JOHNS HOPKINS UNIVERSITY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, NORTHWESTERN UNIVERSITY, UNIVERSITY OF NOTRE DAME DU LAC, THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA, WILLIAM MARSH RICE UNIVERSITY, VANDERBILT UNIVERSITY, and YALE UNIVERSITY,

Defendants.

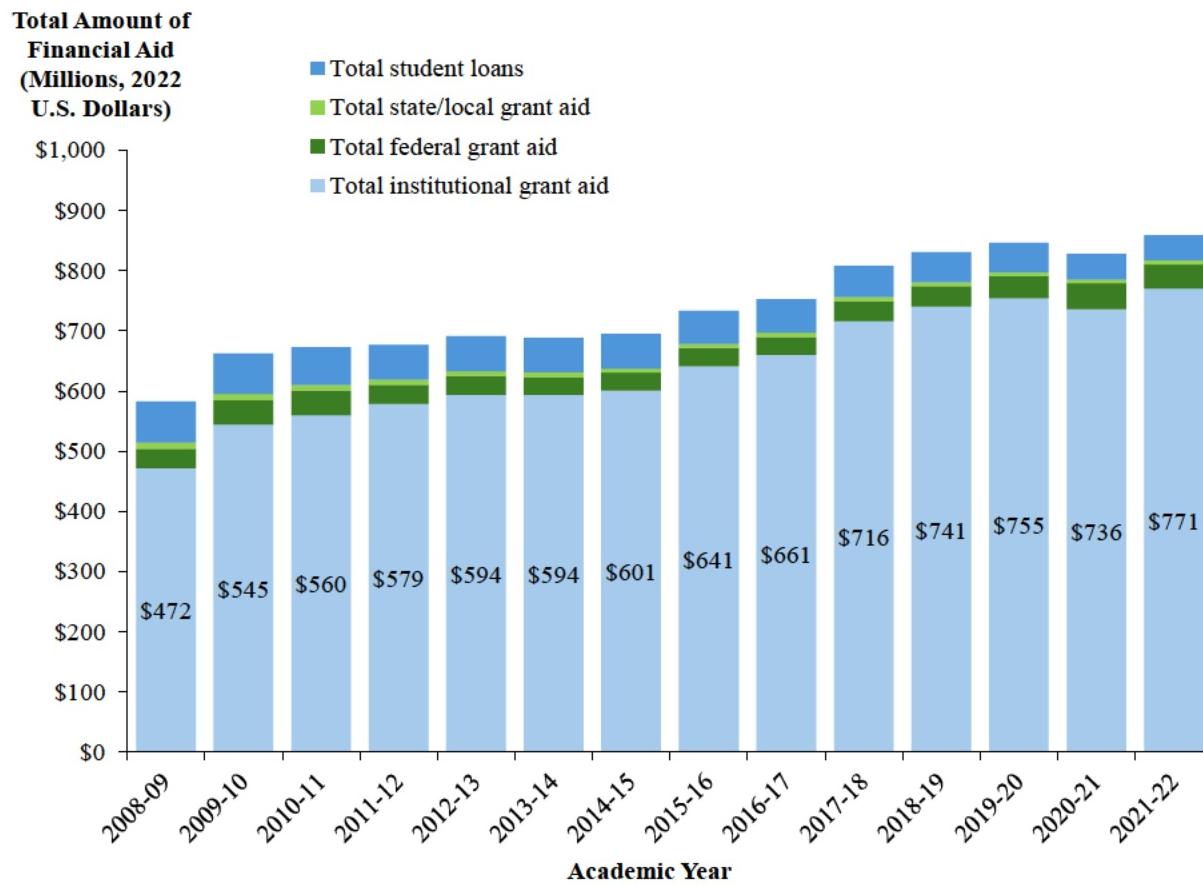
Case No. 1:22-cv-00125

Hon. Matthew F. Kennelly

**EXPERT REPORT OF BRIDGET TERRY LONG, PH.D.
AUGUST 7, 2024**

institutional grant aid, Georgetown awarded a total of \$401 million, MIT awarded a total of \$428 million, Notre Dame awarded a total of \$677 million, and Penn awarded a total of \$766 million in institutional grant aid.⁸⁷

Figure 3
Defendants Devote Substantial Resources to Providing Institutional Grant Aid⁸⁸



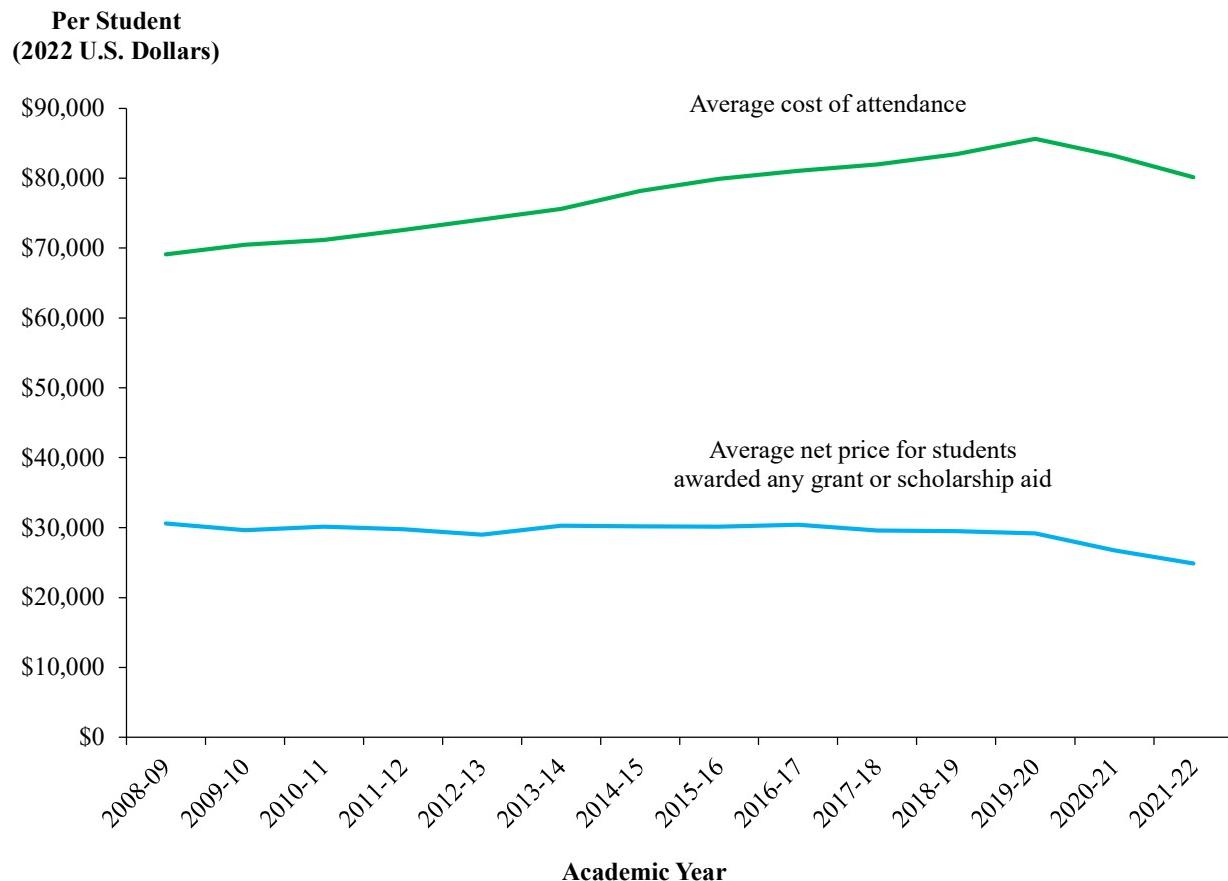
Notes:

[1] Financial aid amounts come from the IPEDS fields “total amount of student loans awarded to full-time first-time undergraduates,” “total amount of institutional grant aid awarded to full-time first-time undergraduates,” “total amount of state/local grant aid awarded to full-time first-time undergraduates,” and “total amount of federal grant aid awarded

⁸⁷ Financial aid dollars are adjusted for inflation to 2022 dollars using the CPI. For academic years, I apply the inflation adjustment to the year of the spring semester. For example, nominal amounts in academic year 2008-2009 are treated as 2009 dollars. Backup materials to this report (IPEDS, Composition of Aid); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>.

⁸⁸ Backup materials to this report (IPEDS, Composition of Aid); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>; “Consumer Price Index for All Urban Consumers: All Items in U.S. City Average,” Federal Reserve Bank of St. Louis, June 2024, available at <https://fred.stlouisfed.org/series/CPIAUCNS>, accessed August 7, 2024.

Figure 4
Defendants' Average Net Price Decreased Over Time for Aided Students⁹⁴



Notes:

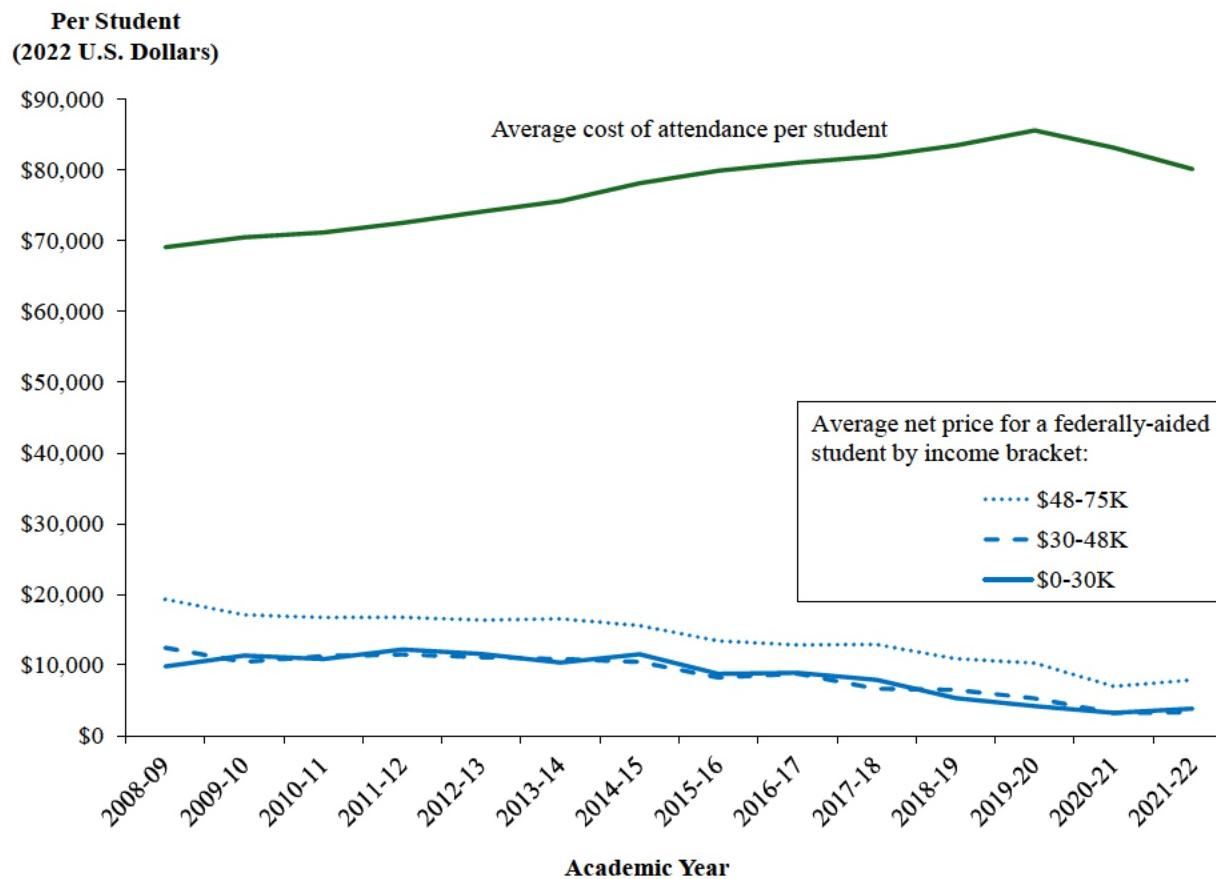
[1] A school's published cost of attendance is reported in IPEDS in the field "Total Price." IPEDS calculates this field as the sum of tuition, required fees, room and board, books and supplies, and other expenses for on-campus first year students. Average cost of attendance in a given year is calculated as the sum of cost of attendance across Defendants in a given year divided by 17, the number of Defendants.

[2] Net price is reported in IPEDS in the field "Average net price for students awarded grant or scholarship aid (current year)." IPEDS calculates this field by subtracting the average amount of aid students receive from federal, state, and local government sources, as well as institutional grant and scholarship aid from cost of attendance. This field is available starting in the 2008-2009 academic year. Average net price for students awarded any grant or scholarship aid in a given year is calculated as the sum of net prices across Defendants in the given year divided by 17, the number of Defendants.

[3] Average net price for students awarded any grant or scholarship aid and average cost of attendance are adjusted for inflation to 2022 dollars using the CPI. For academic years, I apply the inflation adjustment to the year of the spring semester. For example, nominal amounts in academic year 2008-2009 are treated as 2009 dollars.

⁹⁴ Backup materials to this report (IPEDS, Net Price); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>; "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average," Federal Reserve Bank of St. Louis, June 2024, available at <https://fred.stlouisfed.org/series/CPIAUCNS>, accessed August 7, 2024.

Figure 5
Defendants' Average Net Price Decreased Over Time for Federally-Aided Students in Low-Income Brackets¹⁶⁹



Notes:

[1] A school's published cost of attendance is reported in IPEDS in the field "Total Price." IPEDS calculates this field as the sum of tuition, required fees, room and board, books and supplies, and other expenses for on-campus first year students. Average cost of attendance in a given year is calculated as the sum of cost of attendance across Defendants in a given year divided by 17, the number of Defendants.

[2] Net prices for federally-aided students for each of the income bracket shown are reported in IPEDS in the fields: "Average net price (income 0-30,000)-students awarded Title IV federal financial aid," "Average net price (income 30,001-48,000)-students awarded Title IV federal financial aid," and "Average net price (income 48,001-75,000)-students awarded Title IV federal financial aid." IPEDS calculates these fields by subtracting the average amount of aid students receive from federal, state, and local government sources, as well as institutional grant and scholarship aid from cost of attendance. These fields are available starting in the 2008-2009 academic year.

[3] Average net price and average cost of attendance are adjusted for inflation to 2022 dollars using the CPI. For academic years, I apply the inflation adjustment to the year of the spring semester. For example, nominal amounts in academic year 2008-2009 are treated as 2009 dollars.

¹⁶⁹ National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>; Backup materials to this report (IPEDS, Net Price); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>; "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average," Federal Reserve Bank of St. Louis, June 2024, available at <https://fred.stlouisfed.org/series/CPIAUCNS>, accessed August 7, 2024.

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receive in financial aid. Improving messaging around financial aid to bridge this knowledge gap improves access by encouraging applications from high-achieving low-income students who might otherwise assume they would not be able to afford to attend schools like Defendants and their peers. This has been a major part of my research, both diagnosing the problem and creating interventions and advocating for policies that would help low-income students better understand and access the financial aid they are eligible to receive.¹⁸¹

92. The data are clear that the net price for federally-aided low-income students at Defendants would be lower than many other schools that appear to have a lower COA. For example, in the 2021-2022 academic year, Georgetown's average COA was \$81,515, Penn's average COA was \$83,298, Vassar College's average COA was \$80,830, and UVA's average in-state COA was \$36,314 and its average out-of-state COA was \$70,696.¹⁸² However, a federally-aided student with a family household income between \$48,000 and \$75,000 would have paid an average net price of \$11,409 at Georgetown and \$11,544 at Penn in the 2021-2022 academic year.¹⁸³ By contrast, a federally-aided student with a family

¹⁸¹ See, for example, Bettinger, Eric P. et al., "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment," *The Quarterly Journal of Economics*, Vol. 127, No. 3, 2012; Avery, Christopher et al., "Digital Messaging to Improve College Enrollment and Success," *Economics of Education Review*, Vol. 84, 2021.

¹⁸² Backup materials to this report (IPEDS, Net Price); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>. Published cost of attendance is reported in IPEDS in the field "Total Price." IPEDS calculates this field as the sum of tuition, required fees, room and board, books and supplies, and other expenses for on-campus first year students.

¹⁸³ Backup materials to this report (IPEDS, Net Price); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>. Net prices for federally-aided students with a household income between \$48,000 and \$75,000 are reported in IPEDS in the field: "Average net price (income 48,001-75,000)-students awarded Title IV federal financial aid." IPEDS calculates this fields by subtracting the average amount of aid students receive from federal, state, and local government sources, as well as institutional grant and scholarship aid from cost of attendance.

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household income between \$48,000 and \$75,000 would have paid an average net price of \$20,408 at Vassar College and \$14,884 at UVA.¹⁸⁴

93. Although many students would pay less to attend Defendant schools, many students are unaware of this given the complexity of the financial aid process. Defendants and their peers have sought to address the information gaps faced by low-income students by simplifying communications around their financial aid policies and addressing concerns specific to low-income students. For example, students often do not understand the differences in the types of financial aid (i.e., grants, which do not need to be paid back, versus loans, which need to be paid back, versus work-study, which is earned through student labor). Moreover, with little awareness about grant aid, low-income students often assume the aid they will receive will be loans. This is especially concerning in efforts to increase college access because, as I note in my research, the academic literature has documented a higher prevalence of debt aversion among low-income students.¹⁸⁵ In fact, a 2002 survey found that low-income students were more likely to report that student loan debt impacted their decision to pursue higher education or their choice of institution.¹⁸⁶ Lower levels of financial literacy also contribute to the aversion low-income students and families have to taking on any debt.¹⁸⁷

¹⁸⁴ Backup materials to this report (IPEDS, Net Price); National Center for Education Statistics, *Integrated Postsecondary Education Data System*, available at <https://nces.ed.gov/ipeds/datacenter>.

¹⁸⁵ Long, Bridget T., "The New Financial Aid Policies: Their Impact on Access and Equity For Low-Income Students?," *Harvard Graduate School of Education*, 2010, p. 6. See also Long (2011).

¹⁸⁶ Baum, Sandy and Marie O'Malley, "College on Credit: How Borrowers Perceive Their Education Debt," *Journal of Student Financial Aid*, Vol. 33, No. 3, 2003. See also Avery, Christopher et al., "A Revealed Preference Ranking of U.S. Colleges and Universities," *The Quarterly Journal of Economics*, Vol. 128, No. 1, 2013.

¹⁸⁷ Anderson, Drew M. et al., "The State of Financial Knowledge in College: New Evidence from a National Survey," *RAND Corporation*, 2018, p. 2; Markle, Gail, "Crushing Debt or Savvy Strategy? Financial Literacy and Student Perceptions of their Student Loan Debt," *Journal of Student Financial Aid*, Vol. 49, No. 1, 2019, p. 1.

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94. In response to the growing literature on debt aversion, as shown in **Figure 6** below, since 2008, many of the Defendants have introduced no-loan policies for all undergraduate students, which eliminate loans from financial aid packages and replace them with scholarships, grants, or work-study. These blanket policies aim to increase applications from low-income students concerned about loan debt, particularly since they are simple and easy to communicate.

Figure 6
Defendants' No-Loan Policies as of 2023¹⁸⁸

Institution	Year
Columbia	2008
Yale	2008
Penn	2009
Vanderbilt	2009
Chicago	2015
Northwestern	2016
MIT	2017
Brown	2018
Johns Hopkins	2019
Dartmouth	2022
Emory	2022
Rice	2022

Notes:

[1] As of 2023, Caltech, Cornell, Duke, Georgetown, and Notre Dame do not have no-loan policies.

[2] Penn phased in their no-loan policy beginning September 2008 restricted to undergraduates with calculated family incomes under \$100,000 and extended the policy to all undergraduate students eligible for financial aid in 2009.

[3] Chicago and Northwestern implemented their policy for incoming first-year and future undergraduate students.

[4] MIT previously established a no-loan policy for all undergraduate students before 2011 but ended their policy as of the 2011-2012 academic year. MIT reinstated their no-loan policy as of the 2017-2018 academic year.

95. Similarly, some of the Defendants have instituted income threshold policies whereby prospective students with family incomes under a certain amount (and with typical amounts of assets) will not have loans in their financial aid packages or will not have a required

¹⁸⁸ Backup to this report (No-Loan Timeline); **Appendix C** (No-Loan Timeline).

evaluate representation of low-income students at those schools.⁶⁰⁷ My research focuses on this set of schools because these schools tend to have higher expenditures per student and produce better outcomes for students than other schools.⁶⁰⁸ This set of schools is approximately consistent with the top 50 USN&WR for universities (both public and private) and liberal arts colleges—including several schools that are similar to Defendants but are artificially excluded from Dr. Singer's proposed relevant market.

284. My approach is consistent with those of other researchers. Relying on the 2008 edition of Barron's Guide, Hoxby and Avery (2013) includes 236 schools from the categories of "Very Competitive Plus" to "Most Competitive" to study low-income students' application rates to selective schools.⁶⁰⁹ Hoxby and Avery (2013) notes that private and public selective colleges "are eager to make their student bodies socioeconomically diverse without enrolling students who are unprepared for their demanding curricula," and these schools thus compete for high-achieving, low-income students through admissions and financial aid policies.⁶¹⁰ Hoxby and Avery (2013) thus includes public universities and liberal arts colleges, as well as schools ranked outside of the USN&WR top 25, contrary to Dr. Singer's proposed relevant market. In another paper, Cheslock and Riggs (2023), which Dr. Singer cites to justify his own reliance on USN&WR rankings, emphasizes that the relevant distinction is between "elite" and "non-elite" schools instead of the top 25 private

⁶⁰⁷ Long (2011), p. 240.

⁶⁰⁸ Long (2011), p. 232, 240.

⁶⁰⁹ Hoxby, Caroline M. and Christopher Avery, "The Missing 'One-Offs': The Hidden Supply of High-Achieving, Low Income Students," *The Brookings Institution*, Vol. 44, No. 1, 2013, p. 2.

⁶¹⁰ Hoxby and Avery (2013), p. 5.

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research schools and others.⁶¹¹ Cheslock and Riggs (2023) defines “non-elite” schools as “those outside of the top 50 in the U.S. News rankings of liberal arts college and universities,” and notably includes both private national universities and liberal arts colleges.⁶¹² The authors rely on findings from Grawe (2018) and Cheslock and Riggs (2021) that note differences in student demand for elite and non-elite schools.⁶¹³ Cheslock and Riggs (2023) thus includes liberal arts colleges, unlike Dr. Singer.

285. Other academic researchers also rely on Barron’s Guide as opposed to USN&WR. Rose and Sorensen (1992) empirically studies the relationship between tuition and financial aid among 502 private higher education institutions.⁶¹⁴ The authors include a range of both national and regional private universities and liberal arts colleges, but exclude schools that do not grant baccalaureate degrees or schools with specialized missions, such as theological seminaries.⁶¹⁵ In their empirical analysis, the authors use Barron’s Guide to control for school selectivity, but they acknowledge that “no single variable can fully reflect institutional quality.”⁶¹⁶ Despite citing to Rose and Sorensen (1992), Dr. Singer does not

⁶¹¹ Singer Report, ¶ 67; Cheslock, John and Sam Riggs, “Ever-Increasing Listed Tuition and Institutional Aid: The Role of Net Price Differentials by Year of Study,” *Educational Evaluation and Policy Analysis*, 2023, p. 10.

⁶¹² Cheslock and Riggs (2023). I note that Cheslock and Riggs separated public schools from their analysis of elite schools due to differing levels of pricing autonomy compared to private schools.

⁶¹³ Cheslock and Riggs (2023), p. 23.

⁶¹⁴ Rose, David and Robert Sorensen, “High Tuition, Financial Aid, and Cross-Subsidization: Do Needy Students Really Benefit?,” *Southern Economic Association*, Vol. 59, 1992, pp. 66-67.

⁶¹⁵ Rose and Sorensen (1992), pp. 69, 71.

⁶¹⁶ Rose and Sorensen (1992), p. 69. Rose and Sorenson also excluded public universities from Barron’s Guide’s index, but this was solely for the purposes of their empirical analysis. The authors state that inclusion of public schools would “reduce the efficiency of [the authors’] coefficient estimates” (p. 71). The exclusion of public universities in this paper is not related to the conception of institutional competition.

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APPENDIX C
LIST OF SOURCES

Common Data Set

“Brown University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“California Institute of Technology Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“University of Chicago Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Columbia College Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Columbia General Studies Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Cornell University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Dartmouth College Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Duke University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Emory University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Georgetown University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Johns Hopkins University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Massachusetts Institute of Technology Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Northwestern University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“University of Notre Dame Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“University of Pennsylvania Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Rice University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Vanderbilt University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

“Yale University Common Data Set,” Common Data Set Initiative, 2021-2022, accessed August 1, 2024.

No-Loan Timeline

- “Dreaming Out Loud,” Vanderbilt University, October 31, 2008, available at <https://news.vanderbilt.edu/2008/10/31/dreaming-out-loud/>, accessed July 22, 2024.
- “Michael Bloomberg Makes Largest Ever Contribution to Any Education Institution in the United States,” Bloomberg Philanthropies, November 18, 2018, available at <https://www.bloomberg.org/press/michael-bloomberg-makes-largest-ever-contribution-education-institution-united-states/>, accessed August 7, 2024.
- “Emory Expands Financial Aid to Allow More Students to Graduate Debt-Free,” Emory University, January 31, 2022, available at https://news.emory.edu/stories/2022/01/upress_emory_advantage_expansion_31-01-2022/story.html?utm_source=together.emory.edu&utm_medium=referral&utm_campaign=Advancement, accessed July 22, 2024.
- “Financial Aid Budget Forecast to Grow 5 Percent as UChicago Implements New Aid Initiatives,” University of Chicago News, April 2, 2015, available at <https://news.uchicago.edu/story/financial-aid-budget-forecast-grow-5-percent-uchicago-implements-new-aid-initiatives>, accessed July 25, 2024.
- “Frequently Asked Questions,” Columbia College, available at <https://cc-seas.financialaid.columbia.edu/enhancements/faq>, accessed July 22, 2024.
- “General FAQs,” Dartmouth College, available at <https://financialaid.dartmouth.edu/faqs/general-faqs>, accessed July 22, 2024.
- “Penn Expands Financial Aid Program to Eliminate Loans: Fact Sheet,” University of Pennsylvania, December 17, 2007, available at <https://penntoday.upenn.edu/news/penn-expands-financial-aid-program-eliminate-loans-fact-sheet>, accessed July 22, 2024.
- “Rice Strengthening Its Commitment to Loan-Free Financial Aid,” Rice University, December 16, 2021, available at <https://news.rice.edu/news/2021/rice-strengthening-its-commitment-loan-free-financial-aid>, accessed July 22, 2024.
- MITLIT-00659580 (“Timeline of Select MIT Financial Aid Policy Changes,” Massachusetts Institute of Technology).
- Clark, Brian, “Brown to Eliminate Packaged Loans from University Undergraduate Aid Awards in 2018-19,” Brown University, December 7, 2017, available at https://news.brown.edu/articles/2017/12/promise?utm_campaign, accessed July 25, 2024.
- Cubbage, Alan, “Northwestern Boosts Financial Aid for Students,” Northwestern University, March 3, 2016, available at <https://news.northwestern.edu/stories/2016/03/northwestern-boosts-financial-aid-for-students/>, accessed July 22, 2024.
- Dunn, Mark, “Yale Enhances Undergraduate Aid Packages for Fourth Time in Six Years,” Yale News, October 28, 2021, available at <https://news.yale.edu/2021/10/28/yale-enhances-undergraduate-aid-packages-fourth-time-six-years>, accessed July 25, 2024.

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COFHE

BROWN_0000331819 (“COFHE Yellowbook for 2014-2015,” Consortium on Financing Higher Education 2014-2015).

BROWN_0000334010 (“COFHE Yellowbook for 2019-2020,” Consortium on Financing Higher Education, 2019-2020).

CORNELL_LIT0000183508 (“COFHE Yellowbook for 2015-2016,” Consortium on Financing Higher Education, 2015-2016).

GTWNU_0000195239 (“COFHE Yellowbook for 2016-2017,” Consortium on Financing Higher Education, 2016-2017).

JHULIT_0000122562 (“COFHE Yellowbook for 2023-2024,” Consortium on Financing Higher Education, 2023-2024).

MITLIT-000152520 (“COFHE Yellowbook for 2018-2019,” Consortium on Financing Higher Education, 2018-2019).

MITLIT-000152521 (“COFHE Yellowbook for 2017-2018,” Consortium on Financing Higher Education, 2017-2018).

MITLIT-000241697 (“COFHE Yellowbook for 2011-2012 Questionnaire,” Consortium on Financing Higher Education, June 3, 2011).

RICE_LIT0000027138 (“COFHE Yellowbook for 2010-2011,” Consortium on Financing Higher Education, 2010-2011).

RICE_LIT0000027141 (“COFHE Yellowbook for 2013-2014,” Consortium on Financing Higher Education, 2013-2014).

NCES Faculty Tenure

National Center for Education Statistics, “Institution Characteristics Cornell University 2022-23,” available at <https://nces.ed.gov/ipeds/institution-profile/190415>, accessed July 26, 2024.

National Center for Education Statistics, “Institution Characteristics Georgetown University 2022-23,” available at <https://nces.ed.gov/ipeds/institution-profile/131496>, accessed July 26, 2024.

National Center for Education Statistics, “IPEDS Institution Data Profile - Massachusetts Institute of Technology,” 2023, available at <https://nces.ed.gov/ipeds/institution-profile/166683>, accessed July 7, 2024.

National Center for Education Statistics, “Institution Characteristics University of Notre Dame 2022-23,” available at <https://nces.ed.gov/ipeds/institution-profile/152080>, accessed July 26, 2024.

National Center for Education Statistics, “Institution Characteristics University of Pennsylvania 2022-23,” available at <https://nces.ed.gov/ipeds/institution-profile/215062>, accessed July 26, 2024.

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APPENDIX D

COMPARISON OF CM GUIDELINES AND DEFENDANTS' INDIVIDUAL NEED ANALYSIS METHODOLOGIES

Appendix D
Methodology for Analyzing Consistency of Defendants' Need Analysis
Methodologies with CM Guidelines

1. This appendix summarizes the methodology I used to analyze Defendants' need analysis methodologies and the extent to which they were consistent with the recommendations in the CM Guidelines.

A. ANALYSIS OF CM GUIDELINES

2. I identified four sets of CM Guidelines that appeared to be finalized, dated June 2001, 2004-05, November 2015, and December 2016. I identified several other versions of CM Guidelines; however, each appeared to be a draft due to the inclusion of track changes in the documents and/or based on the content of the emails to which they were attached. See

Figure D.i, below, for a summary of the CM Guidelines documents I identified.

Figure D.i

Date of Document	Example Bates Stamp	Draft/Final	Notes
June 2001	UCHICAGO_0000183661	Final	The cover email dated 7/3/2001 (UCHICAGO_0000183658) says "A copy of the final report of the subcommittee on a new 'Consensus Approach to Need Analysis' is also attached for your information and files "
2004-05 (Members Only Version)	NULIT-0000161662	Final	No cover emails or other documentation were found to suggest that this version is a draft
November 2010	Emory_568Lit_0000224	Draft	The cover email dated 11/18/2010 (Emory_568Lit_0000223) refers to this document as "Ted's draft rewrite of the manual "
November 2012	MIDDLEBURY003665	Draft	The cover email dated 10/20/2014 (MIDDLEBURY003632) notes that this version was circulated ahead of the 568 Group meeting in October 2013 and includes "possible/proposed changes to income, asset and business equity adjustments "
January 2013	GTWNU_0000006237	Draft	The cover email dated 12/28/2012 (GTWNU_0000006234) says "I am attaching a revised draft of the 568 CM Manual that was prepared by Bill Schilling in anticipation of our upcoming Workshop "
October 2014	GTWNU_0000141656	Draft	The cover email dated 8/12/2014 (GTWNU_0000141655) says "In anticipation of our conf call on Friday, I am attaching my redrafts of the Consensus Methodology Manual[]"
November 2015	DARTMOUTH_0000152041, Final RICE_LIT0000007065		The cover email dated 2/10/2016 (DARTMOUTH_0000152040) says "I have attached (above) the 568 Manual with some of the technical corrections [...] We have not yet posted the manual to the site (members only), as we are still looking into the password issue " The file name of the attachment indicates this version was "approved "
December 2016	DARTMOUTH_0000091786, Final NULIT-0000000348, PENN568-LIT-00162887		The cover email (DARTMOUTH_0000091785) says "Please see attached the final versions of the Professional Judgment and Consensus Methodology Manuals "
April 2019	MITLIT-000006825	Draft	The cover email (MITLIT-000006823) says "I have done some work on the PJ and CM Manuals based on the document [...] that Bernie sent us "

3. For each of the four finalized CM Guidelines, I identified the recommended treatment (if any) for the 17 elements of need analysis discussed in the CM Guidelines. I assumed that

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the recommended treatment of an element in any finalized set of CM Guidelines did not change unless a new, finalized set of CM Guidelines was published with an updated recommendation, with the exception of home equity, for which a document in the record confirmed that the recommendation changed in 2005.¹

4. The CM Guidelines' [REDACTED]

[REDACTED]. **Figure D.ii** below shows these values in each academic year from 2003 to 2022.

Figure D.ii: Institutional Methodology Option Values

Academic Year	[REDACTED]	[REDACTED]	Source
AY 2003	[REDACTED]	[REDACTED]	CBD004281 at 281.
AY 2004	[REDACTED]	[REDACTED]	CBD004286 at 286.
AY 2005	[REDACTED]	[REDACTED]	CBD004291 at 292.
AY 2006	[REDACTED]	[REDACTED]	CBD004296 at 297.
AY 2007	[REDACTED]	[REDACTED]	CBD004301 at 302.
AY 2008	[REDACTED]	[REDACTED]	CBD004306 at 307.
AY 2009	[REDACTED]	[REDACTED]	CBD004311 at 312.
AY 2010	[REDACTED]	[REDACTED]	CBD004316 at 317.
AY 2011	[REDACTED]	[REDACTED]	CBD004321 at 322.
AY 2012	[REDACTED]	[REDACTED]	CBD004326 at 327.
AY 2013	[REDACTED]	[REDACTED]	CBD004331 at 334.
AY 2014	[REDACTED]	[REDACTED]	CBD004345 at 348.
AY 2015	[REDACTED]	[REDACTED]	CBD004359 at 362.
AY 2016	[REDACTED]	[REDACTED]	CBD004373 at 376.
AY 2017	[REDACTED]	[REDACTED]	NULIT-0000111384 at 387.
AY 2018	[REDACTED]	[REDACTED]	NULIT-0000166453 at 457.
AY 2019	[REDACTED]	[REDACTED]	NULIT-0000000649 at 655
AY 2020	[REDACTED]	[REDACTED]	NULIT-0000000540 at 545.
AY 2021	[REDACTED]	[REDACTED]	NULIT-0000000094 at 099.
AY 2022	[REDACTED]	[REDACTED]	NULIT-0000000665 at 670.

¹ DARTMOUTH_0000359371 at 375.

B. ANALYSIS OF DEFENDANTS' NEED ANALYSIS METHODOLOGIES

5. For each Defendant, I reviewed all documentation I could identify with respect to that Defendant's baseline need analysis methodology during the Class Period defined by Dr. Singer for information on their treatment of the 17 elements discussed by the CM Guidelines.² The materials I identified and reviewed included policy manuals, financial aid software settings, responses to a questionnaire from the United States Government Accountability Office, other produced documents, and deposition testimony.
6. Documentation was not always precise about the exact timing of a methodological approach. To the extent available, I included either the academic year or the most specific date (at the monthly level) available in the underlying documentation. For depositions, if no timeframe was specified, I assumed the testimony described the approach taken in the closest academic year to the date of the deposition.
7. Software settings reflect the value of the global options set by Defendants for the purpose of calculating EFCs within a particular software system (e.g., PowerFAIDS, Banner). However, I note that each school might change options locally for individual students, or might make global changes across groups of students outside of the software settings. In the absence of additional information, I have treated software settings as reflecting the Defendant's treatment of each element for the purpose of my analysis. In addition, I note that some software settings are not sufficiently precise to be informative about whether a Defendant was consistent with the CM Guidelines. For example, the produced software settings related to the treatment of family and student assets only allow two options: to treat

² See Singer Report, ¶ 9. I understand that there is a dispute as to when individual Defendants entered or exited the 568 Group. In my analysis, I use the Class Period as presented by Dr. Singer, but I am not opining on the correct conduct dates. To the extent that the Class Period is updated, I may be asked to update my analysis.

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all reported student assets as student assets or to treat all reported student assets as parent assets (except for trust funds).³ Because neither option is consistent with the nuances of the CM Guidelines' recommended treatment of this element, financial aid officers would always have to make adjustments not captured by the software settings to be consistent with the recommendation in the CM Guidelines. Therefore, for this element, I did not consider software settings sufficiently informative as to whether a Defendant's approach was consistent with the CM Guidelines.

C. ANALYSIS OF DEFENDANTS' CONSISTENCY WITH CM GUIDELINE RECOMMENDATIONS

8. As discussed in **Section IV.B**, I excluded nine elements of need analysis from my analysis because the CM Guidelines did not provide actionable recommendations for the treatment of the element, or because sufficient information was not available across Defendants to consistently analyze the treatment of the element. Specifically, I found that the CM Guidelines discussed but did not provide actionable recommendations on the following elements: divorced, separated, and single parents; parental unemployment; retirement allowances; IM taxation bands; family loan debt; one-time income adjustments; special expense adjustments; and parent businesses. In addition, although the CM Guidelines provided actionable recommendations for the definition of income, for the majority of Defendants, produced documents and deposition testimony about their need analysis methodologies did not provide sufficient information for me to analyze whether they were consistent with the CM Guidelines' recommendations. I have included the information I gathered for each Defendant related to its treatment of these elements in the backup

³ See, for example, NULIT-0000000240 at 249; NULIT-0000181680 at 747.

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materials to this Appendix, but I have not analyzed each Defendant's consistency with the CM Guidelines for these elements.

9. For the remaining eight elements, I compared each Defendant's treatment with the recommendation in the CM Guidelines. If the CM Guidelines' recommendation had multiple components, I considered the Defendant's consistency with each component.
10. For each element and year with available data, I classified each Defendant's need analysis methodology as follows:
 - **Consistent:** A Defendant's need analysis methodology was classified as consistent with the CM Guideline recommendation if its treatment of the element was consistent with the CM Guideline for all components of the recommendation for which information was available.
 - **Inconsistent:** A Defendant's need analysis methodology was classified as inconsistent with the CM Guideline recommendation if its treatment of the element was inconsistent with the CM Guideline for any component of the recommendation for which information was available. If a Defendant's treatment was consistent with some, but not all, components of the CM Guideline, it was marked as inconsistent.
 - **Insufficient information:** A Defendant's need analysis methodology was classified as having insufficient information if there was not sufficient information to determine whether the Defendant was consistent with the CM Guideline recommendation for any component of the recommendation for that element. This includes cases where the information was missing and cases where multiple sources of information appeared to be contradictory.

Appendix Table D.1
Comparison of CM Guidelines and Brown Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[Jan 2007] Brown did not adjust the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM	[Jan 2007] No; Brown did not account for differences in cost of living between areas.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[Jan 2007] Brown used IM optional treatment of elementary and secondary school tuition expenses. [AY 2014-AY 2015] Brown made an allowance for private school tuition expenses covering "all or a portion of a sibling's private school education costs."
	Consistent with CM	[Jan 2007] Yes. [AY 2014-AY 2015] Insufficient information.
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2004 -AY 2007] Brown assessed student assets at the FM student asset assessment rate of 35%. [Jan 2007, AY 2014-AY 2015] Brown treated assets reported in the student's name as student assets and assessed them at 20%.
	Consistent with CM	[AY 2004-AY 2007, AY 2014-AY 2015] No; assets reported in students name are treated as student assets.

Appendix Table D.1
Comparison of CM Guidelines and Brown Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[Jan 2007, AY 2010-AY 2011] Brown capped home equity at 3 times income minus mortgage debt. [AY 2015-AY 2017] Brown capped home value at 3 times income. [AY 2022] Brown did not consider home equity in its need analysis.
	Consistent with CM	[Jan 2007, AY 2010-AY 2011] No; home equity capped at 3 times income. [AY 2015-AY 2017] No; home value capped at 3 times income. [AY 2022] No; home equity not considered.
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[Jan 2007] Brown imputed assets based on an assumed 3% rate of return. Brown imputed assets based only on interest and not on dividend income.
	Consistent with CM	[Jan 2007] No; Brown imputed assets at a 3% interest rate based only on interest, not on dividend income.

Appendix Table D.1
Comparison of CM Guidelines and Brown Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[Jan 2007] Brown made an allowance for unreimbursed medical expenses exceeding 11% of the IPA. [AY 2010-AY 2011, AY 2016-AY 2017] Brown made an allowance for unreimbursed medical expenses exceeding 99.9% of income. [AY 2014] Brown made an allowance for unreimbursed medical expenses exceeding the standard FM allowance. [AY 2015] Contradiction between produced documents: <ul style="list-style-type: none"> • According to software settings, Brown made an allowance for unreimbursed medical expenses exceeding 99.9% of income. • According to other produced documents, Brown made an allowance for unreimbursed medical expenses exceeding the standard FM allowance.
	Consistent with CM	[Jan 2007, AY 2010-AY 2011, AY 2014-2017] No; Brown used alternative income thresholds to determine the allowance.
		 Number of Siblings in College CM Guidelines <ul style="list-style-type: none"> • Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college; • Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and • Do not count parents towards the number of family members in college. In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none"> • If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and • If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy		[Jan 2007, AY 2014] Brown used the FM percentages to split the parent contribution for multiple siblings in college. Brown lowered the allowance if the sibling attended a low cost school. Brown did not count siblings in graduate or professional school as siblings in college except if the family provided documentation that the sibling was a dependent for aid purposes in AY 2006. Brown did not include parents for the number in college. [AY 2010, AY 2011, 2015-2017, AY 2022] Brown used the FM percentages to split the parent contribution for multiple siblings in college.
	Consistent with CM	[Jan 2007, AY 2010, AY 2011, AY 2014, 2015-2017, AY 2022] No; Brown uses FM percentages to split the parent contribution.

Appendix Table D.1
Comparison of CM Guidelines and Brown Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[Jan 2007, AY 2014, AY 2015, AY 2022] Brown added back rental depreciation and losses to income.
Consistent with CM		[Jan 2007, AY 2014, AY 2015, AY 2022] Yes; based on components for which information is available.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.2
Comparison of CM Guidelines and Caltech Methodology
(AY 2020-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2020-AY 2022] Caltech adjusted the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM	[AY 2020-AY 2022] Yes.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2020-AY 2022] Caltech did not make an allowance for elementary and secondary school tuition expenses.
	Consistent with CM	[AY 2020-AY 2022] No; Caltech did not make an allowance for elementary and secondary school tuition expenses.
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2020-AY 2021] Contradiction between deposition and produced documents: <ul style="list-style-type: none"> • According to deposition testimony, Caltech treated all student assets as parents assets. • According to software settings, Caltech did not treat student assets as family assets. [AY 2022] Caltech treated all student assets as parents assets.
	Consistent with CM	[AY 2020-AY 2021] Contradiction between deposition and produced documents. [AY 2022] No; Caltech does not treat student trust funds and assets from sources other than the parent as student assets.
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2020-AY 2022] Caltech did not consider home equity in its need analysis.
	Consistent with CM	[AY 2020-AY 2022] No; Caltech did not include home equity.

Appendix Table D.2
Comparison of CM Guidelines and Caltech Methodology
(AY 2020-AY 2022)

Element	Summary of Baseline Treatment	
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
Institutional Policy	[AY 2020]	Caltech did not impute assets. [AY 2021] Contradiction between produced documents: <ul style="list-style-type: none">• According to software settings, Caltech did not impute assets.• According to its Needs Analysis Manual, Caltech imputed assets assuming either a 1.3% or a 2.7% rate of return, depending on the total amount of interest income, tax exempt interest, and dividend income. [AY 2022] Caltech did not impute assets.
Consistent with CM		[AY 2020-AY 2022] No; Caltech either did not impute assets or imputed assets assuming a different rate of return.
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
Institutional Policy	[AY 2020, AY 2022]	Caltech used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [AY 2021] Caltech made an allowance for unreimbursed medical expenses that exceeded 5% of income.
Consistent with CM	[AY 2020, AY 2022]	Yes. [AY 2021] No; Caltech made a different allowance for unreimbursed medical expenses than recommended by the College Board.

Appendix Table D.2
Comparison of CM Guidelines and Caltech Methodology
(AY 2020-AY 2022)

Element	Summary of Baseline Treatment
<i>Number of Siblings in College</i>	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	[AY 2020-AY 2022] Caltech used the FM percentages to split the parent contribution for multiple siblings in college. Caltech capped the allowance for siblings enrolled in community college at the total cost of attendance.
Consistent with CM	[AY 2020-AY 2022] No; Caltech used the FM percentages to split the parent contribution by the number of siblings in college.

Appendix Table D.2
Comparison of CM Guidelines and Caltech Methodology
(AY 2020-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>		<p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy	[AY 2020]	Caltech added back rental and other real estate depreciation to income.
		[AY 2021] Caltech added back rental and other real estate depreciation to income unless the amount of depreciation was less than or equal to \$1,500. Caltech imputed the value of rental properties based on either the amount of depreciation or mortgage interest paid.
Consistent with CM	[AY 2020-AY 2021]	Yes; based on components for which information is available.

Note:

[1] From AY 2020 to AY 2022, Caltech used both the FM and the IM as the starting point for its need analysis methodology for different students. I analyzed whether Caltech's need analysis methodology was consistent with the CM Guidelines when it used the IM as the starting point rather than the FM.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.3
Comparison of CM Guidelines and Chicago Methodology
(AY 2003-AY 2013)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2003-AY 2005] Chicago reported that it was not consistent with the CM Guidelines on cost-of-living variances.
<i>Elementary and Secondary School Tuition Expenses</i>	Consistent with CM	[AY 2003-AY 2005] No; Chicago reported that it was not consistent with the CM Guidelines.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2005] Contradiction between produced documents: <ul style="list-style-type: none">• According to its response to the GAO survey, Chicago's treatment of elementary and secondary school tuition expenses was consistent with the CM Guidelines.• According to produced documents, Chicago used the IM optional treatment of elementary and secondary tuition expenses only if the parent contribution "seem[ed] excessive given a family's income." [AY 2006-AY 2013] Chicago made an allowance for elementary and secondary school tuition expenses only if the parent contribution "seem[ed] excessive given a family's income." Chicago capped the allowance for elementary and secondary school tuition expenses at \$7,900.
Consistent with CM		[AY 2003-AY 2005] Contradiction between produced documents.
		[AY 2006-AY 2013] No; Chicago only included an allowance for elementary and secondary tuition expenses for some families and in some years used a different cap for the allowance.

Appendix Table D.3
Comparison of CM Guidelines and Chicago Methodology
(AY 2003-AY 2013)

Element	Summary of Baseline Treatment	
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2003-AY 2005] Contradiction between produced documents: <ul style="list-style-type: none">• According to its response to the GAO survey, Chicago's treatment of family and student assets was consistent with the CM Guidelines.• According to another produced document, Chicago treated student assets, including student trust funds, assets given to the student by their parents under \$10,000, assets given to the student by other parties, pre-paid tuition plans, among others, as student assets. [AY 2006-AY 2013] Chicago treated student assets, including student trust funds, assets given to the student by their parents under \$10,000, assets given to the student by other parties, pre-paid tuition plans, among others, as student assets. Beginning AY 2009, Chicago noted that it disregarded student assets if the total value of those assets was less than \$100.
	Consistent with CM	[AY 2003-AY 2005] Contradiction between produced documents. [AY 2006-AY 2013] No; Chicago treated most student assets as student assets.
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2003-AY 2004] Contradiction between produced documents: <ul style="list-style-type: none">• According to its response to the GAO survey, Chicago's treatment of home equity was not consistent with the CM Guidelines.• According to another produced document, Chicago capped home equity at 2.4 times parent income minus mortgage debt. [AY 2005] Chicago capped home equity at 3.0 times parent income minus mortgage debt. [AY 2006] Chicago capped home equity at 2 times parent income.
		[AY 2007-AY 2013] Chicago capped home equity at 1.2 times parent income.
	Consistent with CM	[AY 2003-AY 2004] Contradiction between produced documents. [AY 2005-AY 2006] No; Chicago used a different home equity cap. [AY 2007-AY 2013] Yes.

Appendix Table D.3
Comparison of CM Guidelines and Chicago Methodology
(AY 2003-AY 2013)

Element	Summary of Baseline Treatment	
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
	Institutional Policy	The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Consistent with CM	[AY 2003-AY 2013] Chicago imputed assets based on an assumed 4% rate of return. Chicago imputed assets based on interest and dividend income.
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2013] Chicago made an allowance for medical expenses exceeding 7.5% of total income. In AY 2012-AY 2013, Chicago did not include this allowance for students admitted under early action.
	Consistent with CM	[AY 2003-AY 2013] No; Chicago used a different threshold and, in some years, did not include any allowance for students admitted under early action.

Appendix Table D.3
Comparison of CM Guidelines and Chicago Methodology
(AY 2003-AY 2013)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	<p>[AY 2003-AY 2005] Contradiction between produced documents:</p> <ul style="list-style-type: none">• According to its response in the GAO survey, Chicago's treatment of the number of siblings in college was consistent with the CM Guidelines.• According to produced documents, Chicago used the IM formula to split the parent contribution for multiple siblings in college when the costs of all schools were equivalent or when taking the siblings' costs directly from the parent contribution would yield a lower contribution for the sibling attending Chicago. Chicago did not count siblings in graduate school as siblings in college. <p>[AY 2006-AY 2013] Chicago used the IM formula to split the parent contribution for multiple siblings in college when the costs of all schools were equivalent or when taking the siblings' costs directly from the parent contribution would yield a lower contribution for the sibling attending Chicago. Chicago did not count siblings in graduate school as siblings in college.</p>
Consistent with CM	<p>[AY 2003-AY 2005] Contradiction between produced documents.</p> <p>[AY 2006-AY 2013] No; Chicago used a different method to adjust for siblings in college when school costs were not equivalent or when taking sibling costs directly from the parent contribution would lead to a higher EFC for the sibling enrolled at Chicago.</p>

Appendix Table D.3
Comparison of CM Guidelines and Chicago Methodology
(AY 2003-AY 2013)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other</i>		
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2003-AY 2005] According to its response to the GAO survey, Chicago's treatment of business and real estate was consistent with the CM Guidelines.
Consistent with CM		[AY 2003-AY 2005] Yes.

Note:

[1] When possible, I relied on manuals outlining Chicago's need analysis methodology for the regular decision admissions cycle. In the absence of such manuals, I instead relied on manuals outlining Chicago's need analysis methodology for the early action admissions cycle.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.4
Comparison of CM Guidelines and Columbia Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Cost of Living Variances	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2021] Columbia adjusted the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM	[AY 2021] Yes.
Elementary and Secondary School Tuition Expenses	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2021] Columbia made an unspecified allowance for elementary and secondary school tuition expenses.
	Consistent with CM	No information.
Family and Student Assets	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2013] Columbia treated student assets as student assets except for assets given to the student by the parent.
		[AY 2014-AY 2022] Columbia treated the first \$10,000 of student assets as parent assets. Columbia treated any additional student assets as student assets.
	Consistent with CM	[AY 2013-AY 2022] No; Columbia applied different rules to determine which student assets to assess as student assets vs. parent assets.
Home Equity	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2021] Columbia capped home equity at 1.2 times income.
	Consistent with CM	[AY 2021] Yes.
Imputing the Value of Liquid Assets	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2021] Columbia imputed assets based on an assumed 4% rate of return.
	Consistent with CM	[AY 2021] Yes.
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	No information.
	Consistent with CM	No information.

Appendix Table D.4
Comparison of CM Guidelines and Columbia Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Number of Siblings in College	CM Guidelines	<ul style="list-style-type: none"> • Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college; • Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and • Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and • If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
	Institutional Policy	[AY 2021] Columbia used the IM percentages to split the parent contribution for multiple siblings in college. Columbia multiplied the parent contribution by 50% for each enrolled sibling if both siblings attended Columbia.
	Consistent with CM	[AY 2021] Yes; based on components for which information is available.
Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)	CM Guidelines	<ul style="list-style-type: none"> • Add back rental/real estate depreciation to income; • Add back any remaining rental loss to income; and • Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family; • If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and • Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
	Institutional Policy	[AY 2021] Columbia added back rental and other real estate depreciation and rental losses to income.
	Consistent with CM	[AY 2021] Yes; based on components for which information is available.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
	Institutional Policy	[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living-table. [AY 2004-AY 2006] Cornell adjusted for cost-of-living for families living in areas with high cost-of-living.
<i>Elementary and Secondary School Tuition Expenses</i>		[AY 2021-AY 2022] Cornell adjusted the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM ¹	[AY 2004-AY 2006] Insufficient information. [AY 2021-AY 2022] Yes.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2004-AY 2006, AY 2012, AY 2014-AY 2020] Cornell considered private school tuition in its need analysis methodology. [AY 2021-AY 2022] Cornell used the IM optional treatment of elementary and secondary school tuition expenses.
Consistent with CM ²		[AY 2004-AY 2006, AY 2012, AY 2014-AY 2020] Insufficient information. [AY 2021-AY 2022] Yes.

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Family and Student Assets	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2004-AY 2006] Cornell treated student assets given to the student from their parents or saved from the student's own employment as parent assets. It treated assets given to the student from a third party (grandparents, godparents, or other relatives) as student assets and assessed them at 25%. In AY 2005-AY 2006, Cornell specified that it would not treat student assets as parent assets if doing so resulted in an EFC lower than the FM EFC.
		[AY 2012, AY 2014-AY 2020] Cornell treated student assets where the source is either the parent or the student (including 529 plans set up by the parent or student and, in AY 2016-AY 2020, student trust funds set up by the parent) as parent assets and all other student assets (including IRAs and Keoghs) as student assets. Cornell disregarded student assets if the total value of those assets was less than a specified threshold and, in AY 2014-AY 2015, disregarded 529 plans set up by third parties.
		[AY 2021-AY 2022] Contradiction between produced documents: <ul style="list-style-type: none">• According to one source, Cornell treated student assets where parents were the source of the asset and pre-paid tuition or savings plans as parent assets and treated student assets provided by third parties or the student, including trusts, as student assets.• According to another source, Cornell treated student assets where the source is either the parent or the student and pre-paid tuition or savings plans as parent assets and treated student assets provided by third parties as student assets.
Consistent with CM		[AY 2004-AY 2006, AY 2012, AY 2014-2020] No; Cornell used different rules to determine which students assets to treat as student assets and which to treat as parent assets.
		[AY 2021-AY 2022] Contradiction between produced documents.

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Home Equity	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
Institutional Policy		[AY 2004-AY 2006] Cornell capped home equity at 2.4 times total income minus mortgage debt.
		[Mar 2008, Oct 2008, AY 2012, AY 2014-AY 2022] Cornell capped home equity at 1.2 times income.
Consistent with CM		[AY 2004, Mar 2008, Oct 2008, AY 2012, AY 2014-AY 2022] Yes.
		[AY 2005-AY 2006] No; Cornell capped home equity at 2.4 times income minus mortgage debt.

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
Institutional Policy		[AY 2004-AY 2006] Cornell imputed assets based on an assumed 4% rate of return. Cornell imputed assets based on interest and dividend income. [AY 2012] Cornell imputed assets based on an assumed 3% rate of return. Cornell imputed assets based on interest and dividend income. [AY 2014-AY 2018] Cornell imputed cash assets using interest income based on an assumed 2% rate of return. Cornell imputed the value of investments using dividend income based on an assumed 4% rate of return. [AY 2019-AY 2022] Cornell imputed assets based on an assumed 3% rate of return. Cornell imputed assets based on interest and dividend income.
Consistent with CM		[AY 2004-AY 2006] Yes. [AY 2012, AY 2014-2022] No; Cornell assumed a different rate of return to impute parent assets.
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
Institutional Policy		[AY 2004-AY 2006] Cornell made an allowance for unreimbursed medical expenses exceeding 4% of income. [AY 2012, AY 2014-AY 2020] Cornell considered unreimbursed medical expenses in its need analysis methodology. [AY 2021-AY 2022] Cornell used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold.
Consistent with CM ³		[AY 2004-AY 2006] No; Cornell used a different income threshold. [AY 2012, AY 2014-AY 2020] Insufficient information. [AY 2021-AY 2022] Yes.

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none"> • Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college; • Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and • Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and • If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship
Institutional Policy	<p>[AY 2004-AY 2006] Cornell used the IM formula to split the parent contribution for multiple siblings in college. Cornell did not count siblings enrolled in graduate school as siblings in college except if the parents provided more than half of the sibling's financial support during the academic year. Cornell used a different method to adjust the parent contribution for siblings with low parent contributions.</p> <p>[AY 2012, AY 2014-AY 2016] Cornell did not count siblings enrolled in graduate school as siblings in college except if the parents provided documentation of a required parent contribution. Cornell used a different method to adjust the parent contribution for siblings with low parent contributions.</p> <p>[AY 2017-2020] Cornell used the IM formula to split the parent contribution for multiple siblings in college. Cornell did not count siblings enrolled in graduate school as siblings in college except if the parents provided documentation of a required parent contribution. Cornell used a different method to adjust the parent contribution for siblings with low parent contributions.</p> <p>[AY 2021] Cornell used the IM formula to split the parent contribution for multiple siblings in college. Cornell counted siblings in graduate and professional school as siblings in college. It counted siblings in graduate and professional school towards the number of siblings in college. Cornell used a different method to adjust the parent contribution for siblings with low parent contributions.</p> <p>[AY 2022] Cornell used the IM formula to split the parent contribution for multiple siblings in college. Cornell counted siblings in graduate and professional school and siblings with low parent contributions or attending low-cost colleges as siblings in college.</p>
Consistent with CM	[AY 2004-AY 2006, AY 2012, AY 2014-AY 2022] No; Cornell at various times used a different method to adjust the parent contribution for siblings with low parent contribution (rather than siblings attending low-cost schools) and adjusted the parent contribution for siblings in graduate and professional school regardless of whether a parent contribution was required for those students.

Appendix Table D.5
Comparison of CM Guidelines and Cornell Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>	CM Guidelines	<ul style="list-style-type: none"> • Add back rental/real estate depreciation to income; • Add back any remaining rental loss to income; and • Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family; • If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and • Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2004-AY 2006] Cornell added back depreciation and rental losses to income.
		[AY 2012, AY 2014-AY 2018] Cornell added back rental losses to income. Cornell used tax assessor websites or Zillow to assess the value of rental properties. If the family occupied one unit in a multifamily property they owned, Cornell treated the equity in the non-owner-occupied portion of the property as other real estate. Cornell would move real estate assets to other real estate if a family reported rental income as a business.
		[AY 2019-AY 2022] Cornell added back rental losses to income. If the family occupied one unit in a multifamily property they owned, Cornell treated the equity in the non-owner-occupied portion of the property as other real estate. In AY 2021-AY 2022, Cornell would move real estate assets to other real estate if a family reported it as a business.
Consistent with CM		[AY 2004-AY 2006] Yes, based on components for which information is available.
		[AY 2012, AY 2014-AY 2022] No; in various years Cornell used tax assessor websites or Zillow to assess the market value of the home and did not treat rental properties as businesses even when they were the primary source of income.

Notes:

- [1] From AY 2004 to AY 2006, produced documents state that Cornell made cost of living adjustments but do not describe how those adjustments were made. Therefore, I did not have sufficient information to determine whether Cornell's policy was consistent with the CM Guidelines' recommendation.
- [2] From AY 2004 to AY 2006, in AY 2012, and from AY 2014 to AY 2020, produced documents state that Cornell considered private school tuition in its need analysis methodology but do not describe how it was considered. Therefore, I did not have sufficient information to determine whether Cornell's policy was consistent with the CM Guidelines' recommendation.
- [3] In AY 2012, and from AY 2014 to AY 2020, produced documents state that Cornell considered unreimbursed medical expenses in its need analysis methodology but do not describe how it was considered. Therefore, I did not have sufficient information to determine whether Cornell's policy was consistent with the CM Guidelines' recommendation.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.6
Comparison of CM Guidelines and Dartmouth Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2006-AY 2007, AY 2010-AY 2012] Dartmouth used professional judgment to adjust for cost-of-living in Alaska, Hawaii, and Puerto Rico on appeal. Dartmouth approved other cost-of-living adjustments only by committee. [AY 2013-AY 2016] Dartmouth approved cost-of-living adjustments by committee. [AY 2017-AY 2022] Dartmouth adjusted the IPA and ERA using the IM cost-of-living table.
	Consistent with CM	[AY 2006-AY 2007, AY 2010-AY 2017] No; Dartmouth used professional judgment to make cost-of-living adjustments on appeal or only if approved by committee. [AY 2017-AY 2021] Yes.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2006-AY 2007, AY 2010-AY 2014] Dartmouth used IM optional treatment of elementary and secondary school tuition expenses. [AY 2015-AY 2021] Dartmouth used IM optional treatment of elementary and secondary school tuition expenses unless the expected parent contribution for the student was lower than the maximum allowance, in which case it capped the allowance at the expected parent contribution instead.
	Consistent with CM	[AY 2006-AY 2007, AY 2010-AY 2014] Yes. [AY 2015-AY 2021] No; Dartmouth used a lower cap for some students.

Appendix Table D.6
Comparison of CM Guidelines and Dartmouth Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment
Family and Student Assets	<p>CM Guidelines [2001, 2004] Assess all student assets as parent assets.</p> <p>[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.</p>
Institutional Policy	<p>[AY 2004] Dartmouth treated all student assets as student assets.</p> <p>[AY 2006] Dartmouth assessed reported student assets at the IM student asset assessment rate of 25% unless the IM student contribution was less than the FM student contribution. Dartmouth treated college savings plans and prepaid tuition plans owned by the parent as parent assets if the beneficiary was a sibling. Dartmouth treated prepaid tuition plans owned by the parent as a resource that reduced self help if the beneficiary was the student.</p> <p>[AY 2007] Dartmouth assessed reported student assets at the FM student asset assessment rate of 20% unless the IM student contribution was less than the FM student contribution. Dartmouth treated college savings plans and prepaid tuition plans owned by the parent as parent assets.</p> <p>[AY 2010-AY 2013] Dartmouth assessed reported student assets at the FM student asset assessment rate of 20%. Dartmouth treated college savings plans owned by either the parent or the student as parent assets. Dartmouth treated prepaid tuition plans owned by the parent as parent assets.</p> <p>[AY 2014-AY 2021] Dartmouth assessed reported student assets at the FM student asset assessment rate of 20%. Dartmouth treated qualified tuition programs owned by either the parent or the student as parent assets. Dartmouth treated UGMAs and UTMAAs as student assets.</p>
Consistent with CM	[AY 2004, AY 2006-AY 2007, AY2010-AY 2021] No; Dartmouth at various times did not treat student assets as parent assets; treated college savings plans and prepaid tuition plans as student assets in some circumstances; and treated UGMAs and UTMAAs as student assets regardless of the source of the gift.

Appendix Table D.6
Comparison of CM Guidelines and Dartmouth Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2006-AY 2009] Dartmouth capped home equity at 2.4 times income minus mortgage debt.
<i>Imputing the Value of Liquid Assets</i>		[AY 2010-AY 2021] Dartmouth capped home equity at 1.2 times income.
	Consistent with CM	[AY 2006-AY 2009] No; Dartmouth capped home value at 2.4 times income.
		[AY 2010-AY 2021] Yes.
<i>Medical Expenses</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2006-AY 2007, AY 2010-AY 2021] Dartmouth imputed assets using interest and dividend income based on an assumed 4% rate of return.
<i>Consistent with CM</i>		[AY 2006-AY 2007, AY 2010-AY 2021] Yes.
	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2006-AY 2007, AY 2010-AY 2011, AY 2013-AY 2021] Dartmouth used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold.
<i>Consistent with CM</i>		[AY 2012] Dartmouth made an allowance for unreimbursed medical expenses that exceeded 3.5% of income.
	Consistent with CM	[AY 2006-AY 2007, AY 2010-AY 2011, AY 2013-AY 2021] Yes.
		[AY 2012] No; Dartmouth used a different income threshold.

Appendix Table D.6
Comparison of CM Guidelines and Dartmouth Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	[AY 2006-AY 2007, AY 2010-AY 2015] Dartmouth used the IM percentages to split the parent contribution for multiple siblings in college. Dartmouth did not count siblings in graduate school as siblings in college without additional documentation. [AY 2016-AY 2021] Dartmouth used the IM percentages to split the parent contribution for multiple siblings in college. Dartmouth did not count siblings in graduate school as siblings in college.
Consistent with CM	[AY 2006-AY 2007, AY 2010-AY 2021] Yes; based on components for which information is available.

Appendix Table D.6
Comparison of CM Guidelines and Dartmouth Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;
<i>Property/ Other</i>		<ul style="list-style-type: none">• Add back any remaining rental loss to income; and
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>		<ul style="list-style-type: none">• Impute rental property value from rental income and/or purchase price and year of purchase.
		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2006-AY 2007, AY 2010-AY 2012] Dartmouth added back the higher of rental depreciation or losses to income. Dartmouth added back real estate losses separately for individual entities.
		[AY 2013-AY 2021] Dartmouth added back the higher of rental depreciation or losses to income. Dartmouth added back real estate losses separately for individual entities. Dartmouth did not impute the value of rental properties.
Consistent with CM		[AY 2006-AY 2007, AY 2010-AY 2012] Yes, based on components for which there is information.
		[AY 2013-AY 2021] No; Dartmouth did not impute rental property value.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.7
Comparison of CM Guidelines and Duke Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2012-AY 2013] Duke adjusted the IPA based on cost-of-living expenses in different parts of the country. [AY 2022] Duke adjusted the IPA and ERA using the IM cost-of-living tables.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Consistent with CM ¹ [AY 2012-AY 2013] Insufficient information. [AY 2022] Yes.
	Institutional Policy	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year. [AY 2012-AY 2013, AY 2021] Duke used IM optional treatment of elementary and secondary school tuition expenses. [AY 2022] Duke made an unspecified allowance for secondary school tuition expenses.
<i>Family and Student Assets</i>	CM Guidelines	Consistent with CM ² [AY 2012-AY 2013, AY 2021] Yes. [AY 2022] Insufficient information.
	Institutional Policy	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets. [AY 2010] Duke treated assets saved under the student's name as parent assets. [AY 2011-AY 2022] Contradiction between deposition testimony and produced documents: <ul style="list-style-type: none">• According to testimony from Janice Coleman, Duke treated assets saved under the student's name as parent assets.• According to testimony from Miranda McCall, Duke treated all student assets as parent assets except for student trust funds, which it treated as student assets. Duke did not consider gifts from third parties (e.g., grandparents) in its need analysis.• According to produced documents, Duke treated all student assets as parent assets except for student trust funds, which it treated as student assets. Duke treated college savings plans as parent assets. Duke treated gifts from third parties (e.g., grandparents) as trust funds.
Consistent with CM		[AY 2010] Yes. [AY 2011-AY 2022] Contradiction between deposition testimony and produced documents.

Appendix Table D.7
Comparison of CM Guidelines and Duke Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2012-AY 2013, AY 2021-AY 2022] Duke capped home equity at 1.2 times income.
<i>Imputing the Value of Liquid Assets</i>	Consistent with CM	[AY 2012-AY 2013, AY 2021-AY 2022] Yes.
	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2012-AY 2013] Duke imputed assets using interest and dividend income based on an assumed 2.5% rate of return. [AY 2021] Duke imputed assets using interest and/or dividend income based on an unspecified rate of return. [AY 2022] Duke imputed assets based on an assumed rate of return that varied annually and ranged between 2% and 3.5%.
<i>Medical Expenses</i>	Consistent with CM ³	[AY 2012-AY 2013, AY 2022] No; Duke used a different rate of return to impute assets.
		[AY 2021] Insufficient information.
	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2012-AY 2013] Duke made an allowance for unreimbursed medical expenses that exceeded 3.6% of income. [AY 2022] Duke used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold.
Consistent with CM		[AY 2012-AY 2013] No; Duke used a different threshold.
		[AY 2022] Yes.

Appendix Table D.7
Comparison of CM Guidelines and Duke Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	[AY 2012-2013] Duke used the IM formula to split the parent contribution for multiple siblings in college. Duke did not count siblings enrolled in graduate or professional school, siblings receiving full merit or athletic scholarships, or siblings enrolled at military academies as siblings in college. Produced documents contain a contradiction as to whether Duke did not count any siblings in community college as siblings in college or whether it only counted siblings in community college if their COA exceeded \$15,000. [AY 2022] Duke used the IM formula to split the parent contribution for multiple siblings in college.
Consistent with CM	[AY 2012-2013] No; Duke used different rules to determine which students it counted as in college. [AY 2022] Yes, based on components for which information is available.

Appendix Table D.7
Comparison of CM Guidelines and Duke Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none"> • Add back rental/real estate depreciation to income; • Add back any remaining rental loss to income; and • Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other</i>		
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>		<p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family; • If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and • Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		<p>[AY 2012 - AY 2013] Duke added back rental losses and depreciation to income. Duke used Zillow to estimate the value of rental properties.</p> <p>[Date unknown] Duke added back rental losses separately for individual entities.</p> <p>[AY 2021] Duke added back rental depreciation to income. Duke treated rental properties as business assets. Duke used real estate websites to estimate the value of rental properties and other real estate.</p> <p>[AY 2022] Duke did not use the purchase price and the date of purchase to impute rental property value. Duke treated all rental and real estate assets as business assets. Duke did not have a standard approach to the treatment of multi-family property. Duke did not add back real estate losses separately for individual entities.</p>
Consistent with CM		<p>[AY 2012-AY 2013, AY 2021-AY 2022] No; Duke used a different method to assess rental property value and, at various times, Duke treated all rental properties as businesses, did not have a standard approach for treating multifamily properties, and did not zero out losses on each rental property separately.</p>

Notes:

- [1] From AY 2012 to AY 2013, produced documents state that Duke made cost of living adjustments but do not describe how those adjustments were made. Therefore, I did not have sufficient information to determine whether Duke's policy was consistent with the CM Guidelines' recommendation.
- [2] In AY 2022, deposition testimony states that Duke made an allowance for secondary school tuition in its need analysis methodology but does not provide sufficient information for me to determine whether Duke's policy was consistent with the CM Guidelines' recommendation.
- [3] In AY 2021, produced documents state that Duke imputed the value of liquid assets but do not specify the rate of return. Therefore, I did not have sufficient information to determine whether Duke's policy was consistent with the CM Guidelines' recommendation.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.8
Comparison of CM Guidelines and Emory Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
Cost of Living Variances	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2009] Emory adjusted the IPA and ERA for high cost-of-living areas.
		[AY 2015] Emory adjusted the IPA based on cost-of-living expenses in different parts of the country.
Elementary and Secondary School Tuition Expenses	Consistent with CM ¹	[AY 2009] Yes. [AY 2015] Insufficient information.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2009, AY 2015] Emory made an allowance for private school tuition expenses capped at \$6,500 for each eligible student.
Family and Student Assets	Consistent with CM	[AY 2009] No; Emory used a different cap.
	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2009, AY 2015] Emory treated student assets as student assets.
	Consistent with CM ²	[AY 2009] No; Emory did not treat student assets as parent assets. [AY 2015] Insufficient information.
Home Equity	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[2007] Emory sometimes capped home equity at 2.4 times income minus mortgage debt. [AY 2009, AY 2015] Emory capped home equity at 2 times income if the home was purchased at least 10 years ago.
	Consistent with CM	[AY 2007, AY 2009, AY 2015] No; Emory used a different home equity cap and did not cap home equity for all students.

Appendix Table D.8
Comparison of CM Guidelines and Emory Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
Imputing the Value of Liquid Assets	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
	Institutional Policy	The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Consistent with CM	[AY 2009, AY 2015] Emory imputed assets using interest income based on an assumed 2% rate of return. Emory imputed assets using dividend income based on an assume 3% rate of return.
Medical Expenses		[AY 2009, AY 2015] No; Emory assumed a different rate of return to impute assets.
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2009] Emory used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold.
	Consistent with CM	[AY 2015] Emory made an allowance for unreimbursed medical expenses that exceeded 3.8% of income.
		[AY 2009] Yes.
		[AY 2015] No; Emory used a different income threshold.

Appendix Table D.8
Comparison of CM Guidelines and Emory Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	<p>[AY 2009] Emory used the IM formula to split the parent contribution for multiple siblings in college.</p> <p>[AY 2015] Emory used the IM formula to split the parent contribution for mulitple siblings in college. Emory multiplied the total parent contribution by 50% for one sibling in college and 35% for two siblings in college if the sibling attended Emory or another similarly priced institution.</p>
Consistent with CM	<p>[AY 2009] Yes, based on components for which there is information.</p> <p>[AY 2015] No; Emory used different percentages to split the parent contribution when siblings also attended Emory or similar priced schools.</p>

Appendix Table D.8
Comparison of CM Guidelines and Emory Methodology
(AY 2004-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2009] Emory added back rental depreciation and losses to income. Emory imputed the value of rental properties using an unspecified multiplier. [AY 2015] Emory added back rental depreciation to income. Emory did not add back rental losses.
Consistent with CM		[AY 2009] Yes, based on components for which there is information. [AY 2015] No; Emory did not add back rental losses.

Notes:

- [1] In AY 2015, produced documents state that Emory made cost of living adjustments but do not describe how those adjustments were made. Therefore, I did not have sufficient information to determine whether Emory's policy was consistent with the CM Guidelines' recommendation.
- [2] I did not consider software settings to contain sufficient information to compare Emory's treatment of family and student assets to the CM Guidelines' recommendation for AY 2015.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2016, AY 2018-AY 2022] Georgetown adjusted the IPA and EPA using the IM cost-of-living tables.
Consistent with CM	[AY 2016, AY 2018-AY 2022] Yes.	
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2004-AY 2009] Georgetown made an allowance for tuition expenses up to \$6,900 for each eligible student. [AY 2019] Georgetown made an allowance for tuition expenses up to \$11,970 for each eligible student. [AY 2022] Georgetown made an allowance for tuition expenses up to \$12,640 for each eligible student. [AY 2011-AY 2015, AY 2017-AY 2018, AY 2020-AY 2021] Contradiction between produced documents: <ul style="list-style-type: none">According to an internal contradiction in its Policy and Procedure manuals, Georgetown made a maximum allowance of either \$6,900 or \$8,870 from AY 2011-AY 2015, either \$6,900 or \$8,870 in AY 2017, and either \$11,970 or \$12,220 in AY 2020.According to software settings, Georgetown made an allowance for tuition expenses up to \$11,750 in AY 2018, \$12,220 in AY 2020, and \$12,540 in AY 2021.According to its Policy and Procedure Manuals, Georgetown made an allowance for tuition expenses up to \$11,970 in AY 2018 and AY 2020 and \$12,640 in AY 2021.
	Consistent with CM	[AY 2004-AY 2009, AY 2012-AY 2015, AY 2017] No; Georgetown used a different cap for elementary and secondary school tuition expenses. [AY 2011, AY 2018, AY 2020-AY 2021] Contradiction between produced documents. [AY 2019, AY 2022] Yes.

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
Institutional Policy		[AY 2016] Georgetown treated student assets as family assets unless the calculated IM EFC is less than FM EFC, in which case Georgetown treated student assets as student assets. [AY 2018-AY 2022] According to its software settings, Georgetown treated student assets as parent assets except for student trust funds, which it treated as student assets.
Consistent with CM ¹		[AY 2016] No; Georgetown either treated all student assets as family assets (including trust funds) or treated all student assets as student assets, depending on whether the calculated IM EFC was less than the FM EFC. [AY 2018-AY 2022] Insufficient information.
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2016, AY 2018-AY 2022] Georgetown capped home equity at 1.2 times income.
Consistent with CM		[AY 2016, AY 2018-AY 2022] Yes.

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
<i>Imputing the Value of Liquid Assets</i>	<p>CM Guidelines</p> <p>Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.</p> <p>The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.</p>
Institutional Policy	<p>[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017-AY 2018, AY 2020-AY 2022]</p> <p>Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 5% rate of return.</p> <p>[AY 2019] According to its software settings, Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 40% rate of return.</p> <p>[AY 2018, AY 2020] Contradiction between produced documents:</p> <ul style="list-style-type: none">• According to its software settings, Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 40% rate of return.• According to its Policy and Procedure manuals, Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 5% rate of return. <p>[AY 2021-AY 2022] Contradiction between produced documents:</p> <ul style="list-style-type: none">• According to its software settings, Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 4% rate of return.• According to its Policy and Procedure Manuals, Georgetown imputed cash assets using interest income based on an assumed 4% rate of return. Georgetown imputed the value of investments using dividend income based on an assumed 5% rate of return.
Consistent with CM	<p>[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017, AY 2019] No; Georgetown assumed a different rate of return to impute the value of investments.</p> <p>[AY 2018, AY 2020-AY 2022] Contradiction between produced documents.</p>

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
Institutional Policy		[AY 2004-AY 2009] Georgetown made an allowance for unreimbursed medical expenses that exceeded 5% of income. [AY 2011, AY 2018-AY 2019] Georgetown used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [AY 2012-AY 2015, AY 2017] Georgetown made an allowance for unreimbursed medical expenses that exceeded 3.5% of income. [AY 2020-AY 2022] Contradiction between produced documents: <ul style="list-style-type: none">• According to its software settings, Georgetown used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. ([AY 2020] 5.0%, [AY 2021-2022] 4.3%).• According to other produced documents, Georgetown made an allowance for unreimbursed medical expenses that exceeded 4.9% of income.
Consistent with CM		[AY 2004-AY 2009, AY 2012-AY 2015, AY 2017] No; Georgetown used a different income threshold. [AY 2011, AY 2018-AY 2019] Yes. [AY 2020-AY 2022] Contradiction between produced documents.

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	<p>[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017-AY 2018, AY 2020-AY 2022] Georgetown used the IM formula to split the parent contribution for multiple siblings in college. Georgetown counted siblings enrolled in professional school (e.g., law, medicine) as siblings in college. Georgetown did not count siblings in ROTC, siblings in military academies, siblings with full scholarships, siblings in community college, or siblings in graduate school as siblings in college.</p> <p>[AY 2018-AY 2022] Georgetown used the IM formula to split the parent contribution for multiple siblings in college.</p> <p>[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017] Georgetown counted siblings enrolled in professional school (e.g., law, medicine) as siblings in college.</p> <p>[AY 2018, AY 2020- AY 2022] Georgetown did not count siblings enrolled in professional school (e.g., law, medicine) as siblings in college.</p>
Consistent with CM	<p>[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017-AY 2018, AY 2020-AY 2022]</p> <p>No; at various times, Georgetown treated siblings in professional school (e.g., law and medicine) as siblings in college and did not treat siblings in community college as siblings in college.</p>

Appendix Table D.9
Comparison of CM Guidelines and Georgetown Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2004-AY 2009, AY 2011-AY 2015, AY 2017-AY 2018, AY 2020-AY 2022] Georgetown added back rental losses to income. [AY 2016] Georgetown added back rental losses and rental and real estate depreciation, net of losses, to income. [AY 2018-AY 2022] Georgetown added back rental losses to income.
Consistent with CM		[AY 2004-AY 2009, AY 2011-AY 2022] Yes, based on components for which information is available.

Notes:

[1] I did not consider software settings to contain sufficient information to compare Georgetown's treatment of family and student assets to the CM Guidelines' recommendation from AY 2018 to AY 2022.

[2] I infer the academic year associated with Georgetown's software settings based on their file names.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.10
Comparison of CM Guidelines and Johns Hopkins Methodology
(AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2022] Johns Hopkins adjusted the IPA and EPA using the IM cost-of-living tables.
	Consistent with CM	[AY 2022] Yes.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2022] Johns Hopkins used IM optional treatment of elementary and secondary school tuition expenses.
	Consistent with CM	[AY 2022] Yes.
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2022] According to produced documents, Johns Hopkins treated all student assets as parent assets except for trust funds, which it treated as student assets.
	Consistent with CM ¹	[AY 2022] Insufficient information.
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2022] Johns Hopkins capped home equity at 1.2 times income.
	Consistent with CM	[AY 2022] Yes.
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2022] Johns Hopkins imputed assets based on an assumed 4% rate of return.
	Consistent with CM	[AY 2022] Yes.

Appendix Table D.10
Comparison of CM Guidelines and Johns Hopkins Methodology
(AY 2022)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2022] Contradiction between deposition testimony and produced documents: <ul style="list-style-type: none">• According to deposition testimony, Johns Hopkins used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold (4.3%).• According to produced documents, Johns Hopkins made an allowance for unreimbursed medical expenses that exceeded 5% of income.
Consistent with CM		[AY 2022] Contradiction between deposition testimony and produced documents.
Number of Siblings in College	CM Guidelines	<ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
	Institutional Policy	[AY 2022] Johns Hopkins used the IM formula to split the parent contribution for multiple siblings in college. Johns Hopkins did not count siblings older than 23, siblings in graduate school, siblings attending military or service academies, or siblings attending community college as siblings in college, but did count parents towards the number of family members in college. Deposition testimony and produced documents contain a contradiction on the treatment of siblings in community college: <ul style="list-style-type: none">• According to deposition testimony, Johns Hopkins considered the cost of attendance for siblings attending community college in the calculation of the parent contribution.• According to produced documents, Johns Hopkins made a standard allowance of \$3,000 for siblings attending community college.
Consistent with CM		[AY 2022] Contradiction between deposition testimony and produced documents.

Appendix Table D.10
Comparison of CM Guidelines and Johns Hopkins Methodology
(AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other</i>		
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2022] Johns Hopkins added back rental and real estate losses and depreciation to income. Johns Hopkins added back rental losses separately for individual entities. Johns Hopkins treated real estate value and debt as business value and debt if a family reported rental income on Schedule E, even if rental income was not the family's primary source of income.
Consistent with CM		[AY 2022] No; Johns Hopkins treated real estate value and debt as business value and debt if there is rental income on Schedule E, even if it was not the primary source of income.

Note:

[1] I did not consider software settings to contain sufficient information to compare Johns Hopkins' treatment of family and student assets to the CM Guidelines' recommendation for AY 2022.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.11
Comparison of CM Guidelines and MIT Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2003-AY 2022] MIT adjusted the IPA and ERA using the IM cost-of-living tables.
<i>Elementary and Secondary School Tuition Expenses</i>	Consistent with CM	[AY 2003-AY 2022] Yes.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2017, AY 2021-AY 2022] MIT used the IM optional treatment of elementary and secondary school tuition expenses.
<i>Family and Student Assets</i>		[AY 2018-AY 2020] MIT made an allowance for elementary and secondary school tuition expenses capped at \$11,450.
	Consistent with CM	[AY 2003-AY 2011, AY 2014-AY 2017, AY 2021-AY 2022] Yes.
		[AY 2012-AY 2013, AY 2018-AY 2020] No; MIT applied a different cap.
<i>Institutional Policy</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2003-AY 2010] MIT treated all student assets where the parent was the source of the asset, including pre-paid tuition plans, college savings plans, and parent-originated trusts, as parent assets. MIT treated student assets given by a third party as student assets.
<i>Consistent with CM</i>		[AY 2011-AY 2020] MIT treated student assets, except trusts, as parent assets, including any pre-paid tuition and savings plans where the parent is the owner.
		[AY 2021-AY 2022] MIT treated all student assets as parent assets.
	Consistent with CM	[AY 2003-AY 2022] No; MIT applied different rules to determine which student assets to assess as student assets vs parent assets.

Appendix Table D.11
Comparison of CM Guidelines and MIT Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2003-AY 2006] MIT capped home equity at 2.4 times income minus mortgage debt. [AY 2007] MIT capped home equity at 1.2 times income. [AY 2008-AY 2013] MIT capped home equity at 1.2 times income for families with income greater than \$100,000. MIT did not consider home equity in its need analysis for families with income less than \$100,000. [AY 2014-AY 2015] MIT capped home equity at 1.2 times income for families with income greater than \$150,000. MIT did not consider home equity in its need analysis for families with income less than \$150,000. [AY 2016-AY 2022] MIT did not consider home equity in its need analysis.
	Consistent with CM	[AY 2003-AY 2004, AY 2007] Yes. [AY 2005-AY 2006] No; MIT applied a different home equity cap. [AY 2008-AY 2022] No; MIT excluded home equity for families with income below certain thresholds and then excluded home equity altogether.
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2003-AY 2013] MIT imputed assets based on an assumed 4% rate of return. MIT imputed assets based on interest and dividend income. [AY 2014- AY 2022] MIT imputed assets based on an assumed 3% rate of return. MIT imputed assets based on interest and dividend income.
	Consistent with CM	[AY 2003-AY 2013] Yes. [AY 2014-AY 2022] No; MIT assumed a different rate of return to impute the value of liquid assets.

Appendix Table D.11
Comparison of CM Guidelines and MIT Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2003, AY 2009-AY 2011, AY 2014, AY 2021-AY 2022] MIT used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [AY 2004-AY 2008] MIT made an allowance for unreimbursed medical expenses that exceeded 3.4% of income. [AY 2012-AY 2013] MIT made an allowance for unreimbursed medical expenses that exceeded 3.5% of income. [AY 2015-AY 2020] MIT made an allowance for unreimbursed medical expenses that exceeded 3.8% of income.
	Consistent with CM	[AY 2003, AY 2009-AY 2011, AY 2014, AY 2021-AY 2022] Yes. [AY 2004-AY 2008, AY 2012-AY 2013, AY 2015-AY 2020] No; MIT applied a different income threshold.

Appendix Table D.11
Comparison of CM Guidelines and MIT Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
<i>Number of Siblings in College</i>	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	<p>[AY 2003-AY 2022] MIT used the IM formula to split the parent contribution for multiple siblings in college. MIT did not count siblings enrolled in graduate or professional school as siblings in college unless they provided documentation of expected parent contributions. MIT used professional judgment for siblings attending low cost schools to proportionally divide the parent contribution according to the cost of each sibling's college.</p> <p>[AY 2004-AY 2005] MIT used professional judgment to multiply the parent contribution by 50% for each enrolled sibling on appeal if two siblings attended MIT.</p> <p>[AY 2006-AY 2009] MIT multiplied the parent contribution by 50% for each enrolled sibling if two siblings attended MIT.</p> <p>[AY 2010-AY 2022] MIT multiplied the parent contribution by 50% for each enrolled sibling on appeal if two siblings attended MIT or a similarly priced private school.</p>
Consistent with CM	<p>[AY 2003, AY 2010-AY 2014] Yes.</p> <p>[AY 2004-AY 2009] No; MIT used different percentages to split the parent contribution when multiple siblings attended MIT.</p> <p>[AY 2015-AY 2022] No; MIT did not cap the allowance for siblings enrolled at community colleges or low-cost schools as part of its standard treatment.</p>

Appendix Table D.11
Comparison of CM Guidelines and MIT Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		<p>[AY 2003-AY 2008] MIT added back rental losses and rental and other real estate depreciation to income. MIT imputed the value of rental properties based on the purchase price and the date of purchase, applying the College Board's Federal Commercial Property Multiplier table.</p> <p>[AY 2009] MIT added back rental losses and rental and other real estate depreciation to income. MIT added back rental losses separately for individual entities. MIT imputed the value of rental properties based on the purchase price and the date of purchase, using the College Board's Federal Commercial Property Multiplier table. If the family occupied one unit in a multifamily property they owned, MIT treated the full amount of equity under home equity.</p> <p>[AY 2010-AY 2022] MIT added back rental losses and rental and other real estate depreciation to income. MIT added back rental losses separately for individual entities. MIT used purchase price and date of purchase to impute rental property value, applying different multipliers over the years. If the family occupied one unit in a multifamily property they owned, MIT treated the equity in the non-owner-occupied portion of the property as other real estate. MIT considered treating real estate as a business if rental real estate was being used as income.</p>
Consistent with CM		[AY 2003-AY 2022] Yes, based on components for which information is available.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.12
Comparison of CM Guidelines and Northwestern Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group. [2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living-table.
	Institutional Policy	[AY 2016-AY 2017] Northwestern adjusted the IPA and ERA for parents who lived in metropolitan areas where the cost of living was higher than the national average. [AY 2018-AY 2022] Northwestern adjusted the IPA and ERA using the IM cost-of-living tables.
<i>Elementary and Secondary School Tuition Expenses</i>	Consistent with CM	[AY 2016-AY 2022] Yes.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2016-AY 2022] Northwestern made an unspecified allowance for elementary and secondary school tuition expenses.
	Consistent with CM ¹ [AY 2016-AY 2022] Insufficient information.	
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2018-AY 2022] According to its software settings, Northwestern treated student assets as student assets.
<i>Home Equity</i>	Consistent with CM ² [AY 2018-AY 2022] Insufficient information.	
	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2018-AY 2022] Northwestern did not cap home equity.
	Consistent with CM	[AY 2018-AY 2022] No; Northwestern did not cap home equity.

Appendix Table D.12
Comparison of CM Guidelines and Northwestern Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
	Institutional Policy	The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Consistent with CM ³	[AY 2016-AY 2022] Northwestern imputed assets based on an unspecified rate of return.
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	No information.
	Consistent with CM	No information.
<i>Number of Siblings in College</i>	CM Guidelines	<ul style="list-style-type: none"> • Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college; • Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and • Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and • If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
	Institutional Policy	[AY 2022] Northwestern reduced the parent contribution by 40% for two siblings in college. Northwestern used professional judgment to protect a certain amount of parent income to pay college costs rather than applying a percent multiplier to unequal parent contribution amounts across families.
	Consistent with CM	No information.

Appendix Table D.12
Comparison of CM Guidelines and Northwestern Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
<i>Rental</i>	CM Guidelines
<i>Property/ Other</i>	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Real Estate (formerly Assessment of Business and Real Estate)</i>	In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy	[AY 2018-AY 2022] Northwestern added back rental losses to income.
Consistent with CM	[AY 2018-AY 2022] Yes, based on components for which information is available.

Notes:

[1] From AY 2016 to AY 2022, produced documents state that Northwestern made an allowance for elementary and secondary school tuition in its need analysis methodology but do not provide sufficient information for me to determine whether Northwestern's policy was consistent with the CM Guidelines' recommendation.

[2] I did not consider software settings to contain sufficient information to compare Northwestern's treatment of family and student assets to the CM Guidelines' recommendation from AY 2018 to AY 2022.

[3] From AY 2016 to AY 2022, produced documents indicate that Northwestern imputed the value of liquid assets but do not specify the rate of return. Therefore, I did not have sufficient information to determine whether Northwestern's policy was consistent with the CM Guidelines' recommendation.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.13
Comparison of CM Guidelines and Notre Dame Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living-table.
	Institutional Policy	[AY 2003-AY 2011] Notre Dame used professional judgment to adjust the IPA and ERA using the IM cost-of-living tables.
		[AY 2012-AY 2016, AY 2018-AY 2022] Notre Dame adjusted the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM	[AY 2003-AY 2011] No; Notre Dame did not apply a cost-of-living adjustment.
		[AY 2012-AY 2016, AY 2018-AY 2022] Yes.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-May 2005] Notre Dame used IM optional treatment of elementary and secondary school tuition expenses.
		[Mar 2006, Jan 2007, AY 2008-AY 2022] Notre Dame used professional judgment to make an allowance for elementary and secondary school tuition expenses.
	Consistent with CM	[AY 2003-May 2005] Yes.
		[March 2006, Jan 2007, AY 2008-AY 2022] No; Notre Dame did not provide an allowance for elementary and secondary school tuition expenses as part of its baseline need analysis methodology.
<i>Family and Student Assets</i>	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2003] Notre Dame used professional judgment to determine the treatment of student assets.
		[Feb 2004-AY 2011] Notre Dame treated student assets greater than \$100 as parent assets if the parents were the source of the assets.
		[AY 2012-AY 2022] Notre Dame treated student assets as student assets except for trust funds established by the parent, which it treated as parent assets.
	Consistent with CM	[AY 2003-AY 2022] No; Notre Dame used different rules to determine which assets to treat as student assets and which to treat as parent assets.

Appendix Table D.13
Comparison of CM Guidelines and Notre Dame Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
Institutional Policy		[Feb 2004-AY 2020] Notre Dame did not cap home equity in its need analysis.
		[AY 2021-AY 2022] Notre Dame capped home equity at 1.2 times income.
Consistent with CM		[Feb 2004-AY 2020] No; home equity not capped.
		[AY 2021- AY 2022] Yes.
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
Institutional Policy		[AY 2003-Feb 2005] Notre Dame reviewed interest and dividend income relative to assets and used professional judgment in the case of discrepancies.
		[AY 2006-Jan 2008] Notre Dame imputed assets based on an assumed 5% rate of return. Notre Dame imputed assets based on interest and dividend income.
		[Jan 2009-AY 2011, AY 2014-AY 2016] Notre Dame imputed assets based on an assumed 4% rate of return. Notre Dame imputed assets based on interest and dividend income.
		[AY 2012-AY 2013, AY 2021-AY 2022] Notre Dame imputed assets based on an assumed 3% rate of return. Notre Dame imputed assets based on interest and dividend income.
		[AY 2017-AY 2020] Notre Dame did not impute assets.
Consistent with CM		[AY 2006-AY 2008, AY 2012-AY 2013, AY 2018-AY 2022] No; Notre Dame either assumed a different rate of return to impute assets or did not impute assets.
		[Jan 2009-AY 2011, AY 2014-AY 2016] Yes.

Appendix Table D.13
Comparison of CM Guidelines and Notre Dame Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[Jan 2004, Feb 2005, Apr 2006, Jan 2007, Jan 2008, Jan 2009, May 2010] Notre Dame made an allowance for all unreimbursed medical expenses. [AY 2011-AY 2013, AY 2015, AY 2018, AY 2020-AY 2022] Notre Dame used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [Feb 2003, AY 2014, AY 2016-AY 2017] Notre Dame made an allowance for unreimbursed medical expenses that exceeded 4% of income (AY 2003), 3.7% of income (AY 2014), or 3.9% of income (AY 2016-AY 2017). [AY 2019] Notre Dame made an allowance for unreimbursed medical expenses that exceeded an unknown percent of income.
	Consistent with CM ¹	[Feb 2003, Jan 2004, Feb 2005, Apr 2006, Jan 2007, Jan 2008, Jan 2009, May 2010, AY 2014, AY 2016-AY 2017] No; Notre Dame used a different income threshold or no income threshold at all. [AY 2011-AY 2013, AY 2015, AY 2018, AY 2020-AY 2022] Yes. [AY 2019] Insufficient information.

Appendix Table D.13
Comparison of CM Guidelines and Notre Dame Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
<i>Number of Siblings in College</i>	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	[AY 2003, Feb 2004, Feb 2005, Apr 2006, Jan 2007, Jan 2008, Jan 2009, May 2010] Notre Dame did not count siblings in graduate school as siblings in college. [AY 2011-AY 2022] Notre Dame did not count siblings in graduate school or siblings in low-cost schools as siblings in college.
Consistent with CM	[AY 2003, Feb 2004, Feb 2005, Apr 2006, Jan 2007, Jan 2008, Jan 2009, May 2010, AY 2011- AY 2014] Yes, based on components for which information is available. [AY 2015-AY 2022] No; Notre Dame treated siblings enrolled in low-cost schools differently.

Appendix Table D.13
Comparison of CM Guidelines and Notre Dame Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental Property/ Other Real Estate (formerly Assessment of Business and Real Estate)</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2003, May 2005] Notre Dame added back rental losses and depreciation to income. [AY 2006] Notre Dame added back rental losses and depreciation to income. Notre Dame treated real estate assets as business assets if they were a family's primary source of income. [Jan 2007-AY 2022] Notre Dame added back rental losses and depreciation to income. Notre Dame treated real estate assets as business assets if they were a family's primary source of income. Notre Dame used the College Board multipliers to impute rental property value. It used a multiplier to impute rental property value.
Consistent with CM		[AY 2003, May 2005, AY 2006-AY 2022] Yes, based on components for which information is available.

Note:

[1] In AY 2019, produced documents indicate that Notre Dame made an allowance for some amount of unreimbursed medical expenses; however, due to the way the document was printed, the threshold used to make that allowance is not visible. Because I am unable to confirm whether Notre Dame's threshold was consistent with the threshold determined by College Board in this year, I do not have sufficient information to determine whether Notre Dame's policy was consistent with the CM Guidelines.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.14
Comparison of CM Guidelines and Penn Methodology
(AY 2003-AY 2018)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living-table.
	Institutional Policy	[AY 2003-AY 2017] Penn adjusted the IPA and ERA using the IM cost-of-living tables.
<i>Elementary and Secondary School Tuition Expenses</i>	Consistent with CM	[AY 2003-AY 2018] Yes.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2018] Penn used the IM optional treatment of elementary and secondary school tuition expenses.
<i>Family and Student Assets</i>	Consistent with CM	[AY 2003-AY 2018] Yes.
	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2003-AY 2018] Penn assessed student assets at 5% except in "special cases," e.g., gift, inheritance, specifically for educational use, and/or when student has particularly large amount of assets compared to family parent contribution." In these cases, Penn assessed up to 20%.
	Consistent with CM	[AY 2003-AY 2018] No; Penn used different rules to determine which assets to assess as student assets and which assets to assess as parent assets.

Appendix Table D.14
Comparison of CM Guidelines and Penn Methodology
(AY 2003-AY 2018)

Element	Summary of Baseline Treatment	
<i>Home Equity</i>	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy ¹	[AY 2003] Penn capped home equity at 2.4 times income. [AY 2004] Penn capped home equity at 2.5 times income. [AY 2005] Penn capped home equity at 1.1 times income. [AY 2006-AY 2012, AY 2015-AY 2018] Penn capped home equity at 1.2 times income. [AY 2013] Penn capped home equity at 1.2 times income for families with income less than \$180,000. Penn capped home equity at 1.7 times income for families with income greater than \$180,000.
Consistent with CM		[AY 2003-AY 2005] No; Penn used a different home equity cap. [AY 2006-AY 2012, AY 2015-AY 2018] Yes. [AY 2013] No; Penn used a different home equity cap for families with income > \$180,000.
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2004, AY 2008, AY 2012] Penn imputed assets based on an assumed 4% rate of return. Penn imputed assets based on interest and dividend income.
Consistent with CM		[AY 2004, AY 2008, AY 2012] Yes.

Appendix Table D.14
Comparison of CM Guidelines and Penn Methodology
(AY 2003-AY 2018)

Element	Summary of Baseline Treatment	
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2003, AY 2005-AY 2006, AY 2008] Penn used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [AY 2004] Penn made an allowance for unreimbursed medical expenses that exceeded 3.4% of income. [AY 2012] Penn made an allowance for unreimbursed medical expenses that exceeded 3.5% of income.
	Consistent with CM	[AY 2003, AY 2005-AY 2006, AY 2008] Yes. [AY 2004, AY 2012] No; Penn used a different threshold.

Appendix Table D.14
Comparison of CM Guidelines and Penn Methodology
(AY 2003-AY 2018)

Element	Summary of Baseline Treatment
<i>Number of Siblings in College</i>	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy ²	[AY 2003-AY 2004] Penn multiplied the total parent contribution by 55% for one sibling in college, 40% for two siblings in college, and 32.5% for three or more siblings in college. [AY 2005-AY 2018] Penn used the IM formula to split the parent contribution for multiple siblings in college. In AY 2012, Penn reduced the allowance for siblings enrolled at a community college or other low-cost college and for siblings receiving non-need based scholarships.
Consistent with CM	[AY 2003-AY 2004] No; Penn used different percentages to split the parent contribution. [AY 2012] No; Penn treated siblings enrolled in community colleges or other low-cost schools, and siblings receiving non-need-based scholarships, differently. [AY 2005-AY 2011, AY 2013-AY 2018] Yes, based on components for which information is available.

Appendix Table D.14
Comparison of CM Guidelines and Penn Methodology
(AY 2003-AY 2018)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none"> • Add back rental/real estate depreciation to income;
<i>Property/ Other</i>		<ul style="list-style-type: none"> • Add back any remaining rental loss to income; and
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>		<ul style="list-style-type: none"> • Impute rental property value from rental income and/or purchase price and year of purchase.
		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none"> • Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family; • If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and • Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		[AY 2003] Penn adds back rental income and depreciation.
		[AY 2004-AY 2012] Penn added back rental and other real estate depreciation to income. Penn did not add back rental losses to income. Penn imputed the value of rental properties using the Federal Housing Multiplier.
		[AY 2013] Penn added back rental and other real estate depreciation to income. Penn did not add back rental losses to income. Penn imputed the value of rental properties using an unspecified housing multiplier.
		[AY 2014-AY 2018] Penn added back rental and other real estate depreciation to income. Penn did not add back rental losses to income. Penn used Zillow to estimate the value of rental properties.
Consistent with CM		[AY 2003] Yes based on the components for which information is available.
		[AY 2004-AY 2018] No; Penn did not add back rental losses and in some years used Zillow to determine the value of rental property.

Notes:

[1] Although Penn in some years applied a home equity cap that was consistent with the CM's home equity cap, throughout the entire time period Penn used a variation of the FM's methodology to assess parent assets in its own need analysis, which lowered the effect of home equity and other considered assets on Penn's calculation of EFC for some families (PENN568-LIT-00055002 at 002). Specifically, Penn added a portion of discretionary net worth to available income and then calculated a single parent contribution from that, rather than separately calculating a parent contribution from income and a parent contribution from assets per the IM's methodology.

[2] I note that in AY 2019, while it was still a member of the 568 Group, Penn changed its treatment of siblings in college by reducing the share of the parent contribution Penn expected a family to contribute (from 60% to 50% for a single sibling in school) and stopped reducing the allowance for siblings enrolled at a community college or other low-cost college and for siblings receiving non-need based scholarships (Varas 30(b)(6) Deposition, 88:3-22).

Sources: Backup materials to this report (Appendix D).

Appendix Table D.15
Comparison of CM Guidelines and Rice Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2003-AY 2022] Rice adjusted the IPA and ERA using the IM cost-of-living tables.
<i>Elementary and Secondary School Tuition Expenses</i>	Consistent with CM	[AY 2003-AY 2022] Yes.
	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2009-AY 2015] Rice did not make an allowance for elementary and secondary school tuition expenses.
<i>Family and Student Assets</i>		[AY 2016-AY 2022] Contradiction between deposition testimony and produced documents: <ul style="list-style-type: none"> • According to deposition testimony, Rice made an allowance for elementary and secondary school tuition expenses beginning in 2016. • According to software settings, Rice did not make an allowance for elementary and secondary school tuition expenses from AY 2016-AY 2022, except for AY 2018 when Rice made an allowance of \$8,000.
	Consistent with CM	[AY 2009-AY 2015, AY 2018] No; Rice did not provide an allowance for elementary and secondary school tuition or provided an allowance that differed from the IM's.
		[AY 2016-AY 2017, AY 2019-AY 2022] Contradiction between deposition testimony and produced documents.
	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2022] Rice treated prepaid tuition and savings plans as parent assets. Rice used professional judgment to determine how to treat assets where the source is someone other than the parent, such as the grandparent or the student.
	Consistent with CM	[AY 2022] No; Rice used a different rule to decide which assets to treat as student assets and which assets to treat as parent assets.

Appendix Table D.15
Comparison of CM Guidelines and Rice Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
Home Equity	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2009-AY 2011] Rice capped home equity at 1.2 times income.
		[AY 2012-AY 2014, AY 2017-AY 2018] Rice capped home equity at 2 times income.
		[AY 2015-AY 2016] Rice capped home equity at 2.2 times income.
		[AY 2017-AY 2018] Rice capped home equity at 2 times income.
		[AY 2020-AY 2021] Rice capped home equity at 0.1 times income.
		[AY 2022] Contradiction between deposition testimony and produced documents: <ul style="list-style-type: none"> • According to deposition testimony, Rice capped home equity at 1.2 times income. • According to software settings, Rice capped home equity at 0.1 times income.
Consistent with CM		[AY 2009-AY 2011] Yes.
		[AY 2012-AY 2018, AY 2020-AY 2021] No; Rice used a different home equity cap.
		[AY 2022] Contradiction between deposition testimony and produced documents.
Imputing the Value of Liquid Assets	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income.
		The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2009-2011] Rice did not impute assets.
		[AY 2012] Rice imputed assets using dividend and interest income based on an assumed 37% rate of return.
		[AY 2013] Rice imputed assets using dividend and interest income based on an assumed 40% rate of return.
		[AY 2014-AY 2020] Rice imputed assets using dividend and interest income based on an assumed 30% rate of return.
		[AY 2021] Rice imputed assets using dividend and interest income based on an assumed 20% rate of return.
		[AY 2022] Rice imputed assets using dividend and interest income based on an assumed 3% rate of return.
Consistent with CM		[AY 2009-AY 2011] No; Rice did not impute the value of liquid assets.
		[AY 2022] No; Rice assumed a different rate of return to impute the value of liquid assets.

Appendix Table D.15
Comparison of CM Guidelines and Rice Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment	
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2009-AY 2022] Rice used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold.
	Consistent with CM	[AY 2009-AY 2022] Yes.
<i>Number of Siblings in College</i>	CM Guidelines	<ul style="list-style-type: none"> • Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college; • Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and • Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none"> • If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and • If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
	Institutional Policy	[AY 2009-AY 2021] Rice used the IM formula to split the parent contribution for multiple siblings in college. [AY 2022] Rice used the IM formula to split the parent contribution for multiple siblings in college. Rice did not count siblings in graduate or professional school as siblings in college unless the family provided documentation that the sibling was dependent for aid purposes. Rice did not allow parents in college to count towards the number of siblings in college. Rice counted siblings in community college and siblings receiving non-need-based aid as siblings in college.
	Consistent with CM	[AY 2009-AY 2021] Yes; based on the elements for which information is available. [AY 2022] No; Rice did not reduce the allowance for siblings in community college or siblings receiving non-need-based aid.

Appendix Table D.15
Comparison of CM Guidelines and Rice Methodology
(AY 2003-AY 2022)

Element	Summary of Baseline Treatment
<i>Rental</i>	CM Guidelines
<i>Property/ Other</i>	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Real Estate</i> <i>(formerly</i> <i>Assessment of</i> <i>Business and Real</i> <i>Estate)</i>	In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy	[AY 2022] Rice added back rental losses and depreciation to income. Rice used Zillow to estimate the value of rental properties. Rice treated rental properties as real estate assets, not as business assets, even if they were a family's primary source of income. Rice considered the equity in the non-owner-occupied portion of a multifamily property on a case-by-case basis.
Consistent with CM	[AY 2022] No; Rice used Zillow to impute rental property value and did not treat rental property as a business even if it was the primary source of income.

Note:

[1] I note that Ms. Walker retired from Rice in November 2022 and therefore assumed that her testimony described Rice's need analysis methodology as of AY 2022.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.16
Comparison of CM Guidelines and Vanderbilt Methodology
(AY 2003-AY 2019)

Element	Summary of Baseline Treatment	
Cost of Living Variances	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living-table.
	Institutional Policy	[AY 2003-AY 2019] Vanderbilt adjusted the IPA and ERA using the IM cost-of-living table.
	Consistent with CM	[AY 2003-AY 2012, AY 2015-AY 2019] Yes.
Elementary and Secondary School Tuition Expenses	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2012, AY 2015-AY 2019] Vanderbilt made an allowance for elementary and secondary school tuition expenses capped at \$3,500 per family.
	Consistent with CM	[AY 2003-AY 2012, AY 2015-AY 2019] No; Vanderbilt used a different cap for elementary and secondary school tuition expenses.
Family and Student Assets	CM Guidelines	[2001, 2004] Assess all student assets as parent assets.
		[2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
	Institutional Policy	[AY 2003] Vanderbilt treated student assets as parent assets.
		[AY 2004-AY 2012, AY 2015-AY 2019] Vanderbilt assessed student assets at 5% except for trust funds, which it assessed at 25%.
Home Equity	CM Guidelines	[AY 2003] Yes.
		[AY 2004-AY 2011, AY 2015-AY 2019] No; Vanderbilt used different rules to determine which student assets should be assessed as student assets and which should be assessed as parent assets.
	Institutional Policy	[AY 2001, 2004] Cap home equity at 2.4 times income minus mortgage debt.
		[2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2003-AY 2004] Vanderbilt capped home equity at 2.4 times income minus mortgage debt.
		[AY 2005-AY 2012, AY 2015-AY 2016] Vanderbilt capped home equity at 2 times income.
		[AY 2017-AY 2019] Vanderbilt capped home equity at 1.2 times income.
	Consistent with CM	[AY 2003-AY 2004, AY 2017-AY 2019] Yes.
		[AY 2005-AY 2012, AY 2015-AY 2016] No; Vanderbilt used a different home equity cap.

Appendix Table D.16
Comparison of CM Guidelines and Vanderbilt Methodology
(AY 2003-AY 2019)

Element	Summary of Baseline Treatment	
<i>Imputing the Value of Liquid Assets</i>	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2003- AY 2012, AY 2015-AY 2019] Vanderbilt imputed assets using interest income based on an assumed 4% rate of return.
	Consistent with CM	[AY 2003-AY 2012, AY 2015-AY 2019] No; Vanderbilt only imputes assets based on interest income.
<i>Medical Expenses</i>	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2003] Vanderbilt made an allowance for unreimbursed medical expenses that exceeded 4% of income. [AY 2004] Vanderbilt made an allowance for unreimbursed medical expenses that exceeded 3.4% of income. [AY 2005-AY 2011, AY 2017-AY 2019] Vanderbilt used the income threshold determined by the College Board to make an allowance for unreimbursed medical expenses above that threshold. [AY 2012, AY 2015-AY 2016] Vanderbilt made an allowance for unreimbursed medical expenses that exceeded 3.7% of income.
	Consistent with CM	[AY 2003-AY 2004, AY 2012, AY 2015-AY 2016, AY 2020] No; Vanderbilt used a different threshold. [AY 2005-AY 2011, AY 2017-AY 2019] Yes.

Appendix Table D.16
Comparison of CM Guidelines and Vanderbilt Methodology
(AY 2003-AY 2019)

Element	Summary of Baseline Treatment
<i>Number of Siblings in College</i>	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	[AY 2014-AY 2019] Vanderbilt did not reduce the allowance for siblings enrolled at community colleges or other low-cost colleges. Vanderbilt did not count siblings as in college (regardless of whether they were enrolled in undergraduate, graduate, or professional school) unless the parents provided more than half of their support.
Consistent with CM	[AY 2014-AY 2019] No; Vanderbilt did not reduce the allowance for siblings enrolled in community colleges or other low-cost schools and did not treat siblings enrolled in undergraduate programs as siblings in college if the parents did not provide at least half of their support.

Appendix Table D.16
Comparison of CM Guidelines and Vanderbilt Methodology
(AY 2003-AY 2019)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other</i>		
<i>Real Estate</i>		
<i>(formerly</i>		
<i>Assessment of</i>		
<i>Business and Real</i>		
<i>Estate)</i>		
		In 2015 and 2016, the CM Guidelines included the following additional recommendations: <ul style="list-style-type: none">• Treat purely rental/real estate businesses as real estate assets unless it is the primary source of income for the family;• If the family occupies one unit in a multifamily property they own, determine the percentage associated with the family's residence and include the appropriate value/debt under home equity; include remaining value/debt under other real estate; and• Schedule E combines rental/real estate and other business income. Each business and real estate loss should be zeroed out separately and losses should not be combined with income from other businesses and rental properties.
Institutional Policy		No information.
Consistent with CM		No information.

Sources: Backup materials to this report (Appendix D).

Appendix Table D.17
Comparison of CM Guidelines and Yale Methodology
(AY 2003-AY 2006, AY 2018-AY 2022)

Element	Summary of Baseline Treatment	
<i>Cost of Living Variances</i>	CM Guidelines	[2001] Adjust IPA and ERA using the cost-of-living table developed by the 568 Group.
		[2004, 2015, 2016] Adjust IPA and ERA using the IM cost-of-living table.
	Institutional Policy	[AY 2003-AY 2006] According to its response in the GAO survey and deposition testimony, Yale's treatment of cost of living variances was consistent with the CM Guidelines.
		[AY 2018-AY 2022] Yale adjusted the IPA and ERA using the IM cost-of-living tables.
	Consistent with CM	[AY 2003-AY 2006, AY 2018-AY 2022] Yes.
<i>Elementary and Secondary School Tuition Expenses</i>	CM Guidelines	Use the IM optional treatment of elementary and secondary school tuition expenses, which includes an allowance against income for these expenses up to a certain amount. This cap is set by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2006] According to its response to the GAO survey and deposition testimony, Yale's treatment of elementary and secondary school tuition expenses was consistent with the CM Guidelines.
		[AY 2018-AY 2022] Yale did not make an allowance for elementary and secondary school tuition expenses.
	Consistent with CM	[AY 2003-AY 2006] Yes.
		[AY 2018-AY 2022] No; Yale did not provide an allowance for elementary and secondary school tuition.

Appendix Table D.17
Comparison of CM Guidelines and Yale Methodology
(AY 2003-AY 2006, AY 2018-AY 2022)

Element	Summary of Baseline Treatment	
Family and Student Assets	CM Guidelines	[2001, 2004] Assess all student assets as parent assets. [2015, 2016] Assess assets in prepaid tuition and savings plans as parent assets. Assess assets where the student is the source of the asset, assets from grandparents and other outside benefactors, and student trust funds as student assets.
Institutional Policy		[AY 2003-AY 2006] According to its response to the GAO survey and deposition testimony, Yale's treatment of family and student assets was consistent with the CM Guidelines. [AY 2018- AY 2020] According to its software settings, Yale treated student assets as student assets. [AY 2021] According to its software settings, Yale treated student assets, except trust funds, as parent assets. [AY 2022] Yale treated student assets up to an unspecified threshold as parent assets. Yale treated student assets above that threshold as student assets.
Consistent with CM ¹	[AY 2003-AY 2006] Yes. [AY 2018-AY 2021] Insufficient information. [AY 2022] No; Yale used a different rule to determine which assets to treat as student assets and which assets to treat as parent assets.	

Appendix Table D.17
Comparison of CM Guidelines and Yale Methodology
(AY 2003-AY 2006, AY 2018-AY 2022)

Element	Summary of Baseline Treatment	
Home Equity	CM Guidelines	[2001, 2004] Cap home equity at 2.4 times income minus mortgage debt. [2005, 2015, 2016] Cap home equity at 1.2 times income.
	Institutional Policy	[AY 2003-AY 2006] According to its response to the GAO survey and deposition testimony, Yale's treatment of home equity was consistent with the CM Guidelines. [AY 2018-AY 2022] Yale capped home equity at 3 times income.
	Consistent with CM	[AY 2003-AY 2006] Yes. [AY 2018-AY 2022] No; Yale used a different home equity cap.
Imputing the Value of Liquid Assets	CM Guidelines	Use a multiplier set by the 568 Group (equal to 25 in all available CM Guidelines, based on an assumed 4 percent rate of return) to impute the principal value of assets that could have generated reported interest and dividend income. The CM Guidelines do not provide a recommendation on how to resolve any discrepancy between reported and imputed assets.
	Institutional Policy	[AY 2003-AY 2006] According to its response to the GAO survey and deposition testimony, Yale's treatment of the imputation of the value of liquid assets was consistent with the CM Guidelines. [AY 2018-AY 2022] Yale imputed assets based on an unspecified rate of return.
	Consistent with CM ²	[AY 2003-AY 2006] Yes. [AY 2018-AY 2022] Insufficient information.
Medical Expenses	CM Guidelines	Use the IM treatment of unreimbursed medical expenses, which includes an allowance against income for these expenses that exceed a certain percentage of income. This percentage is determined by the College Board and varies from year to year.
	Institutional Policy	[AY 2003-AY 2006] According to its response to the GAO survey and deposition testimony, Yale's treatment of unreimbursed medical expenses was consistent with the CM Guidelines. [AY 2022] Yale "followed the spirit" of the CM Guidelines.
	Consistent with CM ³	[AY 2003-AY 2006] Yes. [AY 2022] Insufficient information.

Appendix Table D.17
Comparison of CM Guidelines and Yale Methodology
(AY 2003-AY 2006, AY 2018-AY 2022)

Element	Summary of Baseline Treatment
Number of Siblings in College	<p>CM Guidelines</p> <ul style="list-style-type: none">• Use the IM formula to account for siblings in college, which multiplies the total parent contribution by 60 percent for one sibling in college, 45 percent for two siblings in college, and 35 percent for three or more siblings in college;• Do not count siblings enrolled in graduate or professional school as siblings in college, unless that sibling is considered a dependent for the purpose of receiving financial aid; and• Do not count parents towards the number of family members in college. <p>In 2015 and 2016, the CM Guidelines included the following additional recommendations:</p> <ul style="list-style-type: none">• If a sibling is attending community college or another low-cost school, do not reduce the total parent contribution by more than the amount of their tuition and fees; and• If a sibling is receiving non-need-based scholarships, do not reduce the total parent contribution by more than the amount of their tuition, fees, room and board net of the scholarship.
Institutional Policy	<p>[AY 2003-AY 2005] According to its response in the GAO survey, Yale's treatment of the number of siblings in college was consistent with the CM Guidelines.</p> <p>[AY 2022] Yale used the FM percentages to split the parent contribution for multiple siblings in college. Yale did not count siblings in graduate or professional school as siblings in college unless the graduate school "require[d] parental information." Yale capped the allowance for siblings enrolled in community college at the total cost of attendance. Yale reduced the parent contribution for siblings receiving non-need based aid.</p>
Consistent with CM	<p>[AY 2003-AY 2005] Yes.</p> <p>[AY 2022] No; Yale used FM percentages to split the parent contribution.</p>

Appendix Table D.17
Comparison of CM Guidelines and Yale Methodology
(AY 2003-AY 2006, AY 2018-AY 2022)

Element	Summary of Baseline Treatment	
<i>Rental</i>	CM Guidelines	<ul style="list-style-type: none">• Add back rental/real estate depreciation to income;• Add back any remaining rental loss to income; and• Impute rental property value from rental income and/or purchase price and year of purchase.
<i>Property/ Other</i>		
<i>Real Estate</i>		
<i>(formerly</i>		
<i>Assessment of</i>		
<i>Business and Real</i>		
<i>Estate)</i>		
Institutional Policy	[AY 2003-AY 2006]	According to its response to the GAO survey and deposition testimony, Yale's treatment of business and real estate was consistent with the CM Guidelines.
	[AY 2018-AY 2022]	Yale added back rental losses to income. Yale did not always impute the value of rental properties using the housing multiplier. Yale would treat rental property as a family's primary home when the family did not have a primary home.
Consistent with CM	[AY 2003-AY 2006]	Yes.
	[AY 2018-AY 2022]	No; Yale did not consistently use a housing multiplier to determine rental property value.

Notes:

[1] I did not consider software settings to contain sufficient information to compare Yale's treatment of family and student assets to the CM Guidelines' recommendation from AY 2018 to AY 2021.

[2] From AY 2018 to AY 2022, produced documents state that Yale imputed the value of liquid assets but do not specify the rate of return. Therefore, I did not have sufficient information to determine whether Yale's policy was consistent with the CM Guidelines' recommendation.

[3] In AY 2022, deposition testimony states that Yale "followed the spirit" of the CM Guidelines but does not provide sufficient information to determine whether Yale's policy was consistent with the CM Guidelines' recommendation.

Sources: Backup materials to this report (Appendix D).